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The care of the human mind is the most noble branch of medicine.—GROTIUS.

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AMERICAN JOURNAL OF INSANITY, FOR JULY, 1885.

INSANITY: ITS FREQUENCY: AND SOME OF ITS PREVENTABLE CAUSES.*

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Insanity is so broad a subject, that in a single address, one can hardly be expected to do more than touch upon some of its prominent features. It has seemed to me, therefore, that the most practical method in which to discuss it, would be to show briefly what insanity is; the frequency of its occurrence; and to call attention to some of its causes, particularly to those which are preventable to a greater or less degree.

What is Insanity? What do we mean when we say a person is insane? The disordered mental state called insanity, is a symptom of disease of the brain, that is, a bodily disease; as much so as any other morbid state of the corporeal system.

The feature that distinguishes insanity from other diseases of the brain, is that it is accompanied with marked and more or less prolonged disturbance of mental action. This alone makes it seem more mysterious than any other. The inexplicable relation of mind to body makes man an enigma to himself, and the greatest enigma of the universe. The poet has

* A lecture in the regular course of the Utica Mechanics' Association, delivered in the Utica Opera House, March 18, 1885.

well described him as "the glory, jest and riddle of the world."

Man recognizes the fact that while he is utterly ignorant of the mode of union between body and mind, he can not get along with either, alone, in the work of life, for it is in their harmonious correlation that his perfectability resides.

If the disorder of the brain which we call insanity, were the only cause affecting mental operations, we might well say: "What a mystery!" The truth is, when the body, or any part of it is "sick," in however mild a degree, the mind is more or less in sympathy. We can see this even in little children. Aching and throbbing of the head and delirium often come from disturbance of the stomach and bowels in children; the brain being in sympathy. Illusions of sight, fanciful pictures and wandering ideas are the outcome of fever. Only a little too much hot blood coursing too rapidly through the little tender brain, and we have this disturbance of mental action.

Delirium and other mental disturbances are quite common in the fevers of children, young people and adults. So under the poisonous effects of narcotics and liquors, we have very marked morbid mental manifestations. Indeed, in ordinary disturbed health, as in indigestion, dyspepsia and the like, this sympathy is so commonly recognized, that people excuse themselves and are excused by others for language and conduct out of all consistency with their ordinary character.

Insanity is an extreme of this condition. As I have said, it is simply a bodily disease in which the mind is disturbed more or less profoundly, because the brain is involved in the sickness, either primarily or secondarily. The mind is not, itself, ever diseased. It is incapable of disease or of its final consequence, death. The

morbid condition of the brain disturbs the mental action; the man is changed in the way of feeling, thinking and acting; an alteration in character that may be slight or profound.

This is manifested by what are commonly called delusions, hallucinations and illusions.

A delusion in a general sense is a false belief; an insane delusion implies a change in the intellectual appreciation of facts and circumstances, and is based on suppositions without foundation, and this false belief is the offspring of disease of the brain—just as delirium is the offspring of a disordered state of brain in fevers or other diseases. The one is a symptom of disease, the other a mistake as to facts or defective logic.

As an illustration of delusion and of the strong hold it has upon the mind, and the thorough change that it makes in the way of thinking, some years ago two persons came into the office within ten minutes of each other, one a woman of about forty-five, the other a young man about twenty-three. I was talking to the woman when the young man and his father came in, and the young man began to stretch his arms upward. When I asked: "What is the meaning of that?" He replied: "I am able to stretch myself and have stretched myself one hundred and fifty feet high. I can take the city of Utica on my head and pass it up into Heaven and bring it down without disturbing a brick or stone." I asked him by what power he could do this. "Why," said he, "I am Jesus Christ." Instantly the woman sprang up and exclaimed: "Then you are my son. I am the Virgin Mary," and kissed him before either his father or I could intervene. Now, here were kindred profound delusions, and an instance in which each was so profoundly insane as not to realize the extraordinary delusion of the other.

An hallucination is a delusive state of mind manifested through the senses. A man hears, sees, tastes, smells or feels what has no reality.

As an illustration of hallucinations, some years ago a young man sprang from the cars upon their arrival in Utica, ran up Genesee street screaming and hallooing, was arrested and brought directly to the asylum by the police. Coming into the office he ran directly behind my chair and called upon me to protect him. I said to him: "From what?" He replied: "From that man standing by the door with two razors in his hand. That man has followed me from Tenallytown, Maryland, and threatened to cut my throat every step. I have just escaped him by jumping from the car." Now he saw that person as clearly and distinctly in space as though it was an absolute reality.

Hallucination of the senses may come from disease of the organs of sight, hearing, etc., but in that case the person recognizes the deception. For instance: a man recently consulted me for a most distressing hallucination of sight, the appearance of a bust of an old man with long hair, suspended in the air. He fully recognized the hallucination. At first it appeared only at infrequent intervals, but finally came so frequently as to be a great annoyance. Upon questioning him I found he had been in the late war, and was injured. When I asked him if he had ever had epilepsy, he said: "Yes, in early boyhood."

A lady of education and great refinement in Utica, some years ago, told me that she had been subject to periods of slight dizziness and faintness, occasionally but rarely falling. She had never lost consciousness, but she always in these states had a marked hallucination of sight. A long stairway opened before her, and going down that stairway a child with a red

hood on her head, but she learned to sit down the moment the dizziness came on, and thus avoided falling. She called the hallucination "Red Riding Hood." The probability is that in both these cases there was a momentary unconsciousness.

Some years ago a little girl about five years of age was brought to me for examination. I conversed with the parents and the little girl for some time. Suddenly she sat down on the floor and her head swayed for a second and she looked up fully conscious. She said she knew when to sit down and not fall; "when three stars, red, blue and yellow, go past my face." The child had *petit mal*.

An illusion is a delusive state of mind manifested through the senses, but instead of being a false creation of sounds or objects of sight, a real sound or object is transformed into something else.

As illustrating illusions, a sick child with a little fever, may in an object hanging upon a chair or upon the wall—or white cloth or gown—think she sees a cat or some other animal or object. That is a deception of the senses, the transformation of one object into another.

These are the three modes of morbid mental manifestations which characterize insanity on the mental side. No matter what may be the false ideas, or on what subject, they are all brought within this narrow range—the essence is false belief; a belief in that which has no existence or a perversion of that which has existence. To illustrate—an insane man asserts and believes that his wife or his friends have turned against him, or are conspiring against him, when there is no foundation for such belief. He may at the same time interpret the words, actions and speech of anxiety and affection as meaning contempt, deception or evil will towards him.

When a man has passed into insanity he moves in a sphere quite his own. His delusive lines of thought are outside of ordinary experience, outside of his own experience. He is not governed by such rules of philosophy or logic or common sense as would ordinarily govern him, but he does not perceive this, or he perceives it very dimly. His acts spring from this unreal illusory standpoint, and unreason becomes to him reason. His heart of human sympathies is completely altered. He no more sees himself overthrown in his reason or changed or perverted in his affections than one does who is in a profound dream. It is indeed a dream. Nothing is too illogical, too absurd, too improbable, too impossible for his belief.

“For we are not ourselves, when Nature being overcome,
Compels the mind to suffer with the body.” (KING LEAR.)

The insane man may remember and understand what he formerly *was* clearly or dimly; but he sees beyond this, and more vividly even what he seems to be in this changed state, and what he *is* to himself.

Discordant with all persons and things about him, he may give up in despair in the awful dilemma and catastrophe of life which he projects from the delusive standpoint that he occupies. In such case the person may be uneasy, depressed, unhappy or even frenzied in speech and action. Or he may take it coolly and at once begin to fortify himself in his position under the influence of his altered emotions, ideas and surroundings as he alone sees them. He may indeed exercise the same deliberateness under the influence of his false beliefs as he would in health if they related to real affairs of life. In this case he may be quiet, reticent, secretive, calm and keep his own counsel.

Another may be demonstrative, condemnatory, dictatorial, boisterous, defiant or even violent and furious

in speech and action. Some are silent, listless, introverted, indifferent; the outside world being little or nothing to them. Realities have vanished and in their stead the mind revolves around a circumscribed and illusory idea. This mental change, we must appreciate, is to the insane a realized fact. The man who believes he is king, is to himself, to his own consciousness, king.

A man was brought to the asylum some years ago, and in taking the history of his case I asked him, "What is your occupation?" He answered, "Raising the dead, that is my sole business." He as much believed that was his occupation and that he did raise the dead, as he ever believed in his real occupation, that of a carpenter.

The extent and intensity of this departure from the natural habitual state, marks the degree of insanity. The majority of persons recognize, more or less, in the beginning, the early alteration of character; the strange ideas coming and going; not a revery or species of dreamy speculation in which the mind is only in intellectual play, but something which while it possesses them seems a deep reality; something which leads them and which they feel powerless to resist or control. These false beliefs or delusive ideas may be pleasant, fanciful and reassuring, or they may be painful, hideous, and forbidding, according to the form of insanity developing; after a while there comes a strong flood of unnatural emotions, feelings, thoughts and purposes which come and go, and finally drive their victim into action.

Some years ago a young girl in this city appeared at the asylum about three o'clock in the morning, sent word by the watchman that she must see me instantly; declined to give her name. Said I would not know

her but she must see me. I went to the office and found a young girl there of about nineteen years of age, draggled, wet and covered with mud. She had left her home to drown herself in the canal, under delusions of unworthiness, with religious depression and general unhappiness, finally culminating in the point of self-destruction, when she felt that she was no longer fit to live, and that longer life would only imperil her soul the more. She said that when she jumped into the cold water it gave her such a shock that she immediately tried to get out, and then she said she thought she would carry out the idea that she had expressed to herself a number of times, of coming to see me and asking me whether she was really the wicked creature she at times supposed she was, or whether she was insane.

At last these false ideas, apprehensions and suspicions begin to take more definite shape and are formulated into distinct delusions which govern and control them. In some cases, even after this stage has been reached, reason seems to return at intervals and they see themselves consciously as having been irrational at the one period, and rational at the other. But they see one state as real as the other.

A lawyer telegraphed me from Syracuse that he would be at the asylum at a certain hour. I was absent in the city when the telegram came, and when he called, being told this, he left. Two days afterwards I got a telegram from him at Albany saying he would call again at a given hour, and requesting me to have Governor Seymour and Judge Denio meet him. He came at the appointed hour and said to me, "I called yesterday to consult you because I have for some time past felt so strangely that I thought I might be out of my mind, but, I have just been to Albany and argued

an important case before the Court of Appeals and feel satisfied that I do not need advice." I saw from his manner and speech that he was very insane, and said to him, "You seem to me to be very insane now." He said, "Well, perhaps, I am excited. I have been at times irrational, I know, but for the most part I am rational." Soon afterwards he was brought to the asylum and declared himself to be President of the United States, and finally said that he was the Ruler of the Universe. Judge Grover, of the Court of Appeals, said to me that he had heard his "argument" which was partly a fourth of July oration, and partly an attack on the courts, and that he was an insane man.

Rarely indeed at this point will efforts to reason with them change their ideas. No matter what philosophy may teach as to consciousness and recognition of surroundings, the majority of men and women in a state of sanity are inclined to believe what they see and feel and think in ordinary life. It is not strange that they should do the same thing when insane, despite reason and reasoning. Reality of belief has been tested at the stake and on the rack, and the reality of the delusions of the insane is not only in the past, a chapter of fearful tragedies, but in the current history of the day as well.

Some years ago, a patient in the asylum complained to his daughter, who was visiting him, of neglect and disrespect shown to him as being unbearable. Her husband came to see about it, and it turned out that the insult was that the patient had declared himself to be the Saviour, and had exhibited the wound of the spear in his side to an attendant, and the attendant said it was insanity.

A lawyer once said to a brother lawyer who came to visit him in the asylum, in my presence, "Do you see

that row of Masons in regalia by that fence?" "No," was the reply; "There is no one there." "Oh!" said the patient with an oath; "I suspected you were an enemy and now I know it. Don't talk to me."

A young man who heard a voice (hallucination) saying: "If thine eye offend thee pluck it out," being unable to push it out, thrust a large pin into his eye and destroyed it. A woman under a similar hallucination went deliberately to the wood pile, and in presence of her husband and children, with a sudden blow struck off her hand. But I need not multiply instances. These illustrate the deep reality of delusions and hallucinations and the nature of the disease, the essence of which is delusion.

Fortunately, all who are insane are not unhappy, nor are the majority of them, but many are happier than in their sane state; having lost in part or in whole their true identity and the identity of other persons and their relations to them, and to things about them, a change in themselves which they no longer recognize, or which if they do they justify; they are like persons who assume a new role of life.

I have endeavored to present a brief sketch of insanity, to bring before you the salient features or manifestations of this disease, as free as possible from technical language. As the further treatment of the subject is chiefly hygienic, intended to meet the public demand for utilizing the results of science in the practical promotion of the good health and social welfare of the community at large, I hope no apology is needed for the elementary and untechnical language employed.

FREQUENCY OF INSANITY.

As to the frequency of insanity I need say but little. Fortunately it is a rare affection when compared with other grave diseases. A physician may have a large practice, occupying all his time constantly, yet he may not have half a dozen cases of insanity among his regular patrons, or even one in a year. It is doubtful if there is one case of insanity in Utica, every year, to every two physicians. The single comment I would make upon this is that there should be fewer still in Utica, and everywhere else over this broad land.

It may properly be asked, what classes of people become insane? If we read the records of hospitals and of society we find on the list, lawyers, doctors, ministers, merchants, and business men in every field of commerce; also farmers, laborers, mechanics, indeed men and women from every calling in life, and of all ages, from twelve upwards.

The question naturally arises: "Has the vocation anything to do with producing insanity?" The answer is, "No." Out of the proper use of an occupation insanity never comes. Occupation is rather a safeguard against it. Insanity comes to all alike, high or low, rich or poor, wise or ignorant.

CLASSIFICATION.

It assumes three fundamental forms.

Mania, manifested by delusions of excitement, expansive ideas, exaggerations, self-consequence, incoherence, &c.

Melancholia, manifested by delusions of depressing character, painful ideas and apprehensions.

Dementia, representing conditions of mental failure and feebleness of mental action.

All cases of insanity come under these three heads. Cases may be acute, sub-acute, chronic, periodic, paroxysmal, but they are either mania, melancholia or dementia.

CAUSES OF INSANITY.

Causes are direct or remote and indirect.

Indirect causes of insanity are numerous, but the direct causes are few. Anything, or series of things, which will impair the health, and especially which causes strain upon the nervous system, and leads to loss of sleep and rest, and to deficient nourishment, or which brings on grief or worry with neglect of ordinary and proper personal care of health, may prove a cause of insanity. The fact is, the disease comes generally in the midst of the duties of life, and in connection with wearing, wasting toil and anxieties, or if in states of idleness then it is usually conjoined with vicious indulgence and dissipation. This is true in all professions and business pursuits, among men and women who are given to labor or domestic cares.

In the actual experience of life a large proportion withstand the strain of all these causes, or at least do not become insane, but under such strain a great many go down in general health, and thus lay a foundation for insanity as well as other nervous disorders for the future. The permanent impairment of general health is likely to produce increased susceptibility to the action of ordinary causes of disease, and thus to lessen the power of resistance to these disturbing processes, and thus a certain number of cases of insanity will follow as one of the results.

In practical every-day life we know that nervous strain is often unavoidable. But if it must come then it should be rendered as harmless as possible by the

use of such means as are best calculated to break its force and cut off evil consequences; and just here, though not speaking of treatment or remedies, I will say in regard to prevention in a general way that under such circumstances we must—

First. Contemplate or recognize fully the fact of strain and appreciate the danger, and then preserve mental equilibrium as far as we can;

Second. We should seize upon all opportunities of physical rest and sleep in order to conserve strength.

Third. We should take abundant nourishment, if not from appetite, then from duty, and go daily into the air and sunlight. Unfortunately we are not apt to take the simple means of prevention which are within our immediate reach and practically in our own hands. It is because the rules of health are simple that we are not only apt to neglect them, but to pass them by without a thought.

SPECIAL CAUSES.

In taking up some special causes of insanity which are prominently in the public mind, I do not intend to ignore other causes, but shall confine myself mainly to a few, which are certainly to a large degree within ordinary control. For causes, as well as preventive measures, we need not look for any hidden or mysterious influences or means difficult to discover. We have only to confine ourselves to our own homes and the associations around us and the practical common sense of every-day life in society.

I will not give emphasis to the statement that insanity is a special disease of civilization, because savages and uncivilized people show cases of insanity as well. But it is certainly fair to say that the duties and responsibilities, the toils and trials of civilization

far exceed those of savage life, and they are potent factors in the causation of insanity. So of the emotions and feelings associated with civilization; they transcend those of savage and uncivilized life so far as to leave little or no basis for comparison, and they are potent factors in causation.

Says Papillon: "In the book of the heart are inscribed, day by day, and hour by hour, all the griefs and all the miseries, and all the vanities, and all the fears, and all the joys, and all the hopes of man."

In broad generalization it is necessary to take into account the differing conditions on which comparisons are made. And, besides, the assumption is, that civilization has fewer drawbacks and infinitely more comforts than savage life, and is more potent to conserve and preserve life, to say nothing of the enjoyments of social and domestic life, education, culture and Christian faith. In savage life the weak die young from neglect and exposure; in civilized life they receive more care than the strong.

Among important, impairing causes I will first speak of the influence of *tobacco* and of *stimulants* on the growth and development of youth, and on their physical and mental health.

From the sixth to the eighteenth years of life, the physical, moral and mental foundations are laid. The domestic surroundings, the habits, the food, the drink, recreation, study and the social life of this period in the main make or unmake the man.

The influences which promote bodily health and growth are abundant, and are represented by wholesome food, sound sleep, regular and simple habits, cheerful temper, out-door sports and exercises, amusements, moderate social enjoyment, and a love of home. These tend to develop bodily growth and vigor of

mind, respect for authority, religious sentiment, filial obedience and self-respect, without which simplicity and harmony of character can not be counted upon. More than this if these are neglected, the whole tendency is to lower the moral tone, lessen ambition, develop disobedience to parental authority, disregard of law, and indifference and disrespect for religion and to breed self-conceit.

All the causes, and especially vicious habits, which interfere with bodily growth and generate unsoundness in the organism in childhood and youth, are apt to affect, also, the mental development, and when combined tend to modify and to stunt the character in its breadth as well as strength.

Are these simple truisms? Yet we can not too earnestly and constantly bring them to our minds. In the first statement, I do not intend to suggest severity of control, privation of rational amusements, forced education and harrassing religious or moral training, nor to inveigh against the tricks, the mischiefs, the squabbles and the contests of boys, whom Solomon encourages to be boys while they are boys, provided they bear in mind that they will soon have to bear the responsibilities of men.

In the second statement, I refer mainly to habits and their effect upon body, mind and character. I do not intend here to include crimes. Crimes are not generally among the early things which we meet. They come as the after-fruit of misdirected or neglected youth, or they come from the criminal associations into which the young are allowed to drift, or in which they are born and reared. The use of tobacco and stimulants and lack of rational out-door exercise in youth are potent factors in producing physical and mental degeneracy. No boy under eighteen should ever touch tobacco, and

it would be better to say twenty. The habitual use of stimulants is in some respects less and in others more deleterious, and they should only be used with reference to improving health, and then only under the advice of physicians. The reason is plain. Through the period of physical growth, the nervous system should not be subjected to habitual narcotism or stimulation. They both interfere with the digestive organs, and with the action of the heart. On some they act as excitants; on others as sedatives—unduly increasing or unduly lowering energy; in either case the result is evil and only evil.

A cigar, cigarette or pipe is taken by a boy to help in some way; to one it is a stimulant and a spur to work, and must therefore be kept up. To another it is a quieting sedative, and it makes him feel easy and as though he could get along somehow, so he keeps it up, and gradually it dulls ambition, abates energy and reconciles him to a lower place as a student and a worker.

I have seen these effects on boys of my own acquaintance, and I have watched them from boyhood to manhood. Many a bright boy at twelve is dull and mediocre at eighteen. He has betrayed the legitimate prospects of youth by tobacco, and possibly by beer, and by the habits they are apt to induce, and will sit through life half way up the ladder instead of at the top. I would ask the boys and young men of these days: Is it nothing to miss the higher chances of sound, vigorous manhood? Nothing to be stunted bodily and mentally, and be less than what you might be? To be old before your time?

But is this always the result of such habits? No. There are those who grow and develop into strong, vigorous manhood, physically and mentally, in spite of

the effects of such habits. Do I believe these indulgences ever benefit these persons? By no means. All that can be said is that their systems tolerated both tobacco and liquor. However, I know young men who were wise enough to stop or modify the narcotism and stimulation, finding for themselves that it was injurious, though tolerated. There is a proportion of youth who are at the best not strong, but to them such indulgences are simply more dangerous.

As an instance of toleration of poison, I recently saw a young person who was taking three grains of arsenic a day, as the result of habit, and the system not only tolerated, but demanded it. This is an amount taken daily sufficient to destroy life.

But you inwardly ask: "What has this to do with insanity?" Much. It tends to impair and disorder physical growth and the development of activity throughout the organism, but especially in the brain and nervous system, thus laying a deceptive and defective foundation for healthful life, and at the same time rendering the organism more susceptible to the influences which originate and develop the morbid processes which we call disease. Among the diseases thus invited are such nervous disorders as neuralgia, St. Vitus' dance, general debility, arrested development in various organs as shown in headaches, lassitude, defective digestion, and finally in many permanently lowered mental power. In cases where insanity comes on it is usually later, and rather as a consequence of the habits which have weakened the constitution.

I have said rational out-door exercise. I mean walking, riding, out-door games, and the gymnasium, boating, hunting, fishing, securing in such exercise pure air and sunlight. To be rational each of these should be taken in its season and in amount not to interfere with

regular systematic study, or systematic occupation, which are to fit them for life and usefulness.

Now what would be the opposite conditions? Idle lounging, indulgence in smoking or tippling, or both, or habitual billiard playing, often conjoining tobacco, and trenching on the hours of study and sleep. Such persons instead of using the exercise of billiards simply in inclement weather, or as an exercise, are too apt to make it an habitual indoor dissipation, flattering themselves that as it gives grace and exercise to the muscular system, so it must be useful. The same may be said of the latest and possibly one of the best indoor exercises—roller-skating. I approve of this exercise, but it needs to be guarded in its use certainly more than it is now. The principal dangers are excess and overstrain, and physical injuries consequent upon the latter. By excess, I mean too frequent indulgence and too long continued. By overstrain, I mean efforts at speed. This induces overwork both upon the heart and lungs, and if kept up for a considerable time can not but do harm to children. It is turning a useful, graceful and agreeable exercise into a toil, under the stimulation of rivalry. This abuse of this exercise is, when contrasted with proper moderate speed, what horse-racing would be to the quiet and healthful speed of ordinary riding. I am speaking of children and youths in reference to these matters, and not of adults and their special exhibitions of skill.

The important fact I wish to impress, is that in the developing period the tissues are soft and elastic, but liable to strain, and no good can come from violent exercise in any form. On the other hand, in the inclemency and cold of winter, as an exercise, after the close of school hours, I have no doubt that roller-skating, under proper restrictions, is beneficial.

OVERSTUDY AND MENTAL STRAIN AS CAUSES.

Now, a word as to schools, study and school hours. A good deal has been said in regard to over-pressure in study and long hours of school, etc., affecting the bodily and mental health of children. It is common to charge the school house and overstudy with headaches, with the dulness, and the nervousness, from which many children suffer who are going to school. I doubt very much whether overstudy has so much to do with them. In too many instances overstudy is the scapegoat for the baleful influence of bad habits in boys and girls, or of poor food, or of neglect of food and insufficient clothing.

It is true children do get sick at school, have headaches, bleeding at the nose and lassitude, and in some instances these are due to over-pressure in study, but in a large number it is due to bad air in the school-room and in their own homes, and to the neglect of children by parents in regard to their eating, by hurrying them through meals and paying but little attention to the quantity they take, or neglecting to see that they get the necessary hours of sleep.

No child under twelve should have less than nine hours of sleep. "Again, children or youths at school or at work, who are attacked with acute diseases, should not be returned to school or to the work-shop until after complete convalescence; and especially in cases of fever, measles and diphtheria, and all cases where the nervous symptoms have been more or less pronounced.

It is too common to allow such children to go back to school or to work as soon as they are fairly able to be about. But the brain, particularly, after such disturbance of circulation and nutrition, needs rest more than ever. I have seen great evil flow from neglect of

this course in many cases. For such children being unable to study and recuperate at the same time, the general health is consequently lowered, an anæmic state becomes persistent, chorea and hysteria often follow, and the physical development is impeded."

Study is certainly healthful, after ten or twelve years of age. It is such systematic brain exercise as promotes growth, strength and stability, physical and mental. It is true that all children are not able to endure the same amount of study, either as to hours or extent of lesson or class studies. An iron-bound system demanding the same of all, would be an unwise system, and fail in its results.

Schools are often failures on this account, even when the teachers are competent, honest and devoted to the interest of the scholars. Parents are often to blame. They desire that their children shall have such and such studies, and take such and such a course. The result too often is that the child fails either in health or mental energy or both, and gets at best less real education and culture than if originally left to the current of his own personality and natural ability. Youths of equal original ability, differ in the power of acquiring, some taking but two hours to learn what others would demand double the time for.

I have frequently been consulted in regard to backward boys. Some years ago a professor in one of our colleges wrote me in regard to his son, and on my suggestion brought him to see me. Careful examination showed him as one of the overpressed cases, a healthy young fellow of good ability, growing rapidly, pushed into higher studies than he could comprehend, but conscientious and ambitious and determined to succeed. His brain was so overwearied that he appeared demented. Regulation of study, and entering a class

further back, soon put him on the right plane, and he accomplished an education with sound physical and mental development.

I have referred to study as healthful *after* ten or twelve years. Previous to that period, the great majority of children are incapable of enduring what might be called study. It is too common a mistake to put children, under this age, to studies that require too much intellectual effort, or which exercise intellect exclusively without reference to memory. The reasoning powers are not properly developed until long after the memory is fresh and active enough to lay in a good stock of knowledge. The earlier studies, therefore, should be such as principally exercise the memory and furnish the materials, upon which the reason may afterwards exercise itself, and of which reason and judgment will afterwards discover the meaning and appreciate the value and necessity. Such studies are spelling and reading, or geography, history and grammar with the mere rudiments of arithmetic. Bringing in a study out of its place in an ascending scale or the attempt to crowd a child into a subject beyond its years, often arrests the proper mental growth, confuses mental conceptions and produces what we sometimes call *obfuscation* or cloudiness of mental faculties.

During the past year a report on the London public schools was made by Dr. Crichton-Browne, a distinguished alienist, and one of Her Majesty's Visitors in Chancery. Dr. Browne claimed from his investigations that the headaches, giddiness, faintness and sleepless nights and other disabilities were due to over-pressure, too high standard in proportion to age, too many hours in school, detention after school hours, and studying at home. It appears from investigation of one of the schools examined and referred to by Dr. Browne,

that forty per cent of the children went to school sometimes without breakfast, and twenty-eight per cent in the afternoon without dinner. That there should be sleeplessness or headache and inability to study under such a system of half-starving, one could well imagine.

EDUCATION AND MENTAL WORK.

What, then, is the influence of education and mental work? Are they promoters of physical vigor and mental soundness and safeguards against insanity or the opposite?

To the first part of the question it is only necessary to answer that the systematic training of a physical organ is not only promotive of its vigor, but necessary for its highest development. This is a physiological law, and the brain is no exception to it.

Further, and as an outcome of this, such exercise and training of the great nervous centre the brain, confers larger power of endurance in the legitimate every-day work of life for which it is constantly called upon, and greater power of resistance to morbid influences as well as greater recuperative energy when attacked by disease. The man thus trained can endure more strain, physical and mental, lose more sleep, act in emergencies on less food than he who is not. Beyond the advantages referred to, education gives to the individual greater power, both intellectual and moral, and is a great safeguard against unbalance of mind.

Education, even in a narrow sense, or that which is obtained in the lower grades of the common schools, is useful against many of the troubles of life, adds to the power of securing comfort and livelihood, and takes away some of the roughness and wearing asperities of human nature. Even this gives increased power of perception of real or seeming evils, and of reasoning and

self-control in meeting and overcoming them. In a broader sense, embracing still higher study and culture, it is certainly one of the greatest, if not the greatest safeguard against insanity. It enables men to understand and appreciate causes, physical and mental, to see through and meet difficulties and maintain self-poise in emergencies, the lack of which so readily overthrows the ignorant. Fear, superstition, the ignorance of nature and of human nature, lie at the bottom or foundation of delusive ideas in the ignorant, both sane and insane. They misunderstand, misinterpret and misapply things which are entirely simple to the educated.

I am not here referring to the few who represent learning in its very highest walks, but to the great body of educated men and women in professions, in business, carrying on the affairs of the domestic, social and political fabric of society, and the educational, benevolent and religious work of the world.

Education must have some meaning to make it successful to youth. When it passes the bounds of common schools intended to furnish the rudimentary instruction necessary to fit boys and girls for the ordinary vocations of life, it must then take into account the bent of mind and purpose of further education in each case and the ability for acquiring. There are some to whom study is a pleasure and the acquisition of the highest education a dream of ambition. To these should be given all possible opportunities. There are others to whom the classics are a stumbling block and philosophy incomprehensible, while history, mathematics, and other branches are easily acquired. There are others again who are unable to master the higher mathematics or retain in their minds the principles involved and the application of rules on leaving the class-room, where they recite mainly from memory, and then painfully and imperfectly.

It is manifest that confusion of mind and defective education, must result from attempts to compel uniform studies for all, in order to secure uniform class training. The further result is, dislike of study as a whole, and more or less indifference even to those branches for which they are competent. Classification of studies to secure the best mental balance must relate rather to the natural competency and mental qualifications of students, than to fixed courses of study, which are usually made the necessary qualifications for a diploma.

We are certainly justified in saying, that experience and the facts of history, as well as the laws of physiology, point to mental culture and activity of mind and brain as beneficial; that they conduce to health of brain and mental balance. As I have already said, the use of the brain is favorable to its growth in early life, and conduces to its stability in maturity. This is equally true of all parts of the organism. The processes of nutrition and assimilation are more active under systematic work, whether labor or study, than in idleness and irregularity of life.

Education and culture are indeed strong defenses against disease, insanity included. The ratio of insanity among intellectual men and women is far less than the proportion found among the general population. When insanity does come on in connection with prolonged mental action and excitement, as in heated political contests, civil and military governments, or in the times of great commercial or financial activity, whether amid prosperity or depression, it will be found that among the prominent actors and leaders there are few who give way. If they do, it is not because of mental activity or enthusiasm, but because of over hours of work, stealing time from sleep, and the general neglect or disregard of the ordinary rules of

hygiene essential to the physical health. When men forget that their bodies are vital structures and not machines, and ignore the fact that nature requires stated periods of cessation of activity, both physical and mental, for the recuperation of the wasted energies in the organism, from the expenditure of force of any grade of activity, they must pay the penalty. Such men may, indeed, occasionally put nature to her utmost strain, and come out safe, and at the same time quite disregard all vital laws. But this can not be persisted in or done often as too many find out to their cost when too late.

I am only here referring to limitations and the effect of mental work, not to concomitant, accidental and unnecessary depressing causes or conditions, the result of ignorance or recklessness. I say mental here, instead of intellectual, because the latter is generally applied in a limited sense. There is often broader and more exacting expenditure of mental power in mercantile, financial and other large business affairs than in any form of study. The scholar marks his higher work by intensity and sustained attention, but associated with very little general waste or attrition with others. It is rare that such work in itself, however constant and intense, does mischief. Unaccompanied by emotional excitement and antagonisms, mental effort raises its own limitations, for when the brain is wearied the work can no longer be successfully continued. Of course, if when the brain is wearied, having reached its limit, the scholar chooses to stimulate it, either by tobacco, narcotics or stimulants, he can get more out of himself, but when he begins this process he brings in new factors, which if kept up may result in physical deterioration, ultimately lowered mental power or unbalance of mind. When emotional excitement and antagonisms are associated with high mental activity

or worry, the wear and danger are far greater, since these make more strain on the whole nervous system, and require more work of the heart and lungs.

I would therefore insist upon this fact: that it is not to the intellectual work that we look for disaster and breaking down or unbalance of mind, but to quite another field; that of physical overstrain and exposure. For instance, a man may attend protracted religious meetings, or he may enter an excited political campaign, or he may be called by the financial, commercial or manufacturing interests into unusual mental effort, and work night and day and neglect regular sleep and food while keeping up prolonged mental and emotional strain, and finally break down, although at the same time he may be taking great pains to guard himself against exposure to the elements. Is it to be wondered at that sometimes such men lose mental balance?

Others again may keep up the mental and emotional strain, secure the necessary food and sleep, but be indifferent to the elements, take cold and have diseases of the lungs and kidneys, or rheumatism, and through these affect the overstrained nervous system, and thus lose mental balance.

Religion or religious fervor does not cause unbalance of mind any more than politics or political fervor. Insanity in such cases could not be charged to religion, or to politics, but to overwork and imprudence. It would not be religious or political insanity any more than rheumatism or pneumonia would be religious or political. These latter are a thousand times more frequent in association with religious or political work than insanity.

I speak of these because they are among the common ways of exhausting the nervous energies and producing disease; because they are all preventable by the

individual if he understands and obeys the ordinary laws of health.

It is sometimes asserted that the wonderful activity and push of business in this country, the inordinate struggle for wealth, the restless spirit of speculation pervading all classes, produce physical deterioration and decay, and a ratio of insanity beyond that of other countries. The facts on which such an assertion is based are not forthcoming. It rests on theory, on the idea that high mental action must produce such results. The necessary comforts and even luxuries of life are so abundant and so accessible in this country, that with few exceptions the physical needs of man are easily secured and health thus maintained. If any man should look over this city of Utica of such large activity and business energy, I think he would answer the question for himself.

What is the practical lesson as to preventive measures in this field of professional and business energy? He who gives himself to work which requires high mental activity on whatever subject or under whatever circumstances or strain, if he obeys the ordinary laws of health in eating, sleeping and protection from the elements is almost wholly without danger. This applies as well to the excitement, or the mental strain in sickness, in grief and all the sorrowful and anxious attendants of illness and loss by death. These are certainly prolific sources of mental depression and unbalance as well as of marked insanity, and the rule enunciated is the safeguard and the only remedy.

SUICIDE AND INSANITY.

The frequency of suicides is a painful fact of the present time. The question is whether they are due to insanity or not. They are largely due, in my opinion,

to a lowered sense of honor and personal responsibility, and loose views in regard to the future life. On this subject there seems to be too little knowledge or reflection, or a strange indifference. It is rare that a daily paper does not chronicle one or more suicides, but a comment is rarely made. I some time ago read of six in a morning paper. The column had a sensational heading, but no comment.

Some think we only in this *imitate* the ancients, among whom suicide was reputable and legal. Any one comparing the sublime reflections of Cicero on this subject with the loose talk of to-day can not fail to see the vast difference between what a man proposes to do or justifies himself in doing when he deems it pleasing to the gods, and what he does and justifies as pleasing to himself and in disregard of conscience. Associated with education and culture we must have not only morals, but religious sentiment, without which there is no sure foundation for the dignity of man or personal responsibility. If man is only a beast that perisheth, when life is unsatisfactory in its present and its prospect, he may as well end it.

Into an age of pagan philosophy was introduced, by a divine teacher, a higher code, which, while neither questioning nor condemning art, literature, statesmanship or military prowess, proclaimed the doctrine of a personal responsibility to a Creator under laws of justice and morality, declaring that man was not only responsible to his Creator, but to the State and community for his character and conduct, the loyalty of virtue and obedience to the powers that be, "to render unto Cæsar the things that were Cæsar's." Responsible, also, for his fellow-man, to "love his neighbor as himself;" and further that there was a life beyond this, open not to the few alone, but to all, conditioned on the manner in which this life was spent.

From that hour in the world's history the aspirations of man have been higher and nobler. Nineteen hundred years have rolled away and that code has stood the test of time and the mutations of the world. It has survived creeds and philosophies and religions of paganism and barbarism, and it stands to-day as the embodiment of all that is sacred in society, religion and civil liberty.

We, in this age, as the inheritors of the good and the wisdom of all ages, are not the degenerate sons to condemn divine philosophy, or put anything contemptible or degrading in its place, or, instead of that religion which teaches the sublime truths of peace, righteousness and good will to man, to intrude disbelief, skepticism or egotistical idolatry of self into our systems of education.

John Adams in a letter to Jefferson in explanation of the expression, "Natural Aristocracy," said: "The grounds of it were virtue and talents." Purity of character and purpose, and the power of influencing others in the right, was true nobility. With regard to life he asserted that a month without appetite or food, would destroy the existing generation, and no future generation would exist, and added: "Thus the exalted dignity of human nature would be annihilated and lost, and in my opinion the whole loss would be of no more importance than putting out a candle, quenching a torch or crushing a fire-fly, *if in this world only we have hope.*"

An old Scotch poet, Waugh, puts into the lips of a Scotchman smoking his pipe this bit of philosophy:

"If mon had been made for a bit of a spree,
An' th' world were a marlockin' schoo
Wi' naught, nobbut heyting an' drinkin' an' glee
An' haliday gam to go thro';
He'd sicken afore
His frolic were o'er,
An' feel he'd bin born for a foo'."

RELIGION.

Is it ever a cause of insanity?

Religion, strange to say, is sometimes set down as a cause of insanity, and we have the expression Religious Insanity, as a current idea. To some it means that a person is insane on the subject of religion; to others that the insanity was caused by religion. What people talk about when they become insane, has rarely anything to do with the real cause of the disease. In all ages of the world, the systems of faith and doctrine of the time respecting man's spiritual being, has been the comfort and solace of the loftiest minds in the contemplation of the ills of this life, as well as those of the unlearned.

Religion can in no sense be charged with producing insanity. Suppose a person attends a religious meeting day after day, and night after night, and finally becomes insane? It is true that insanity, in some instances, though rarely, follows after such attendance and the consequent excitement and mental strain. As I have said at another point, so do rheumatism, colds and pneumonia.

In such instances it is the exposure and neglect of food, loss of sleep, excessive physical activity without rest, which break down the general health and induce various diseases, insanity included. I know that the history of the world shows that sometimes a whole neighborhood gets into a state of excitement, and the madness seems to be universal. This is not insanity, but fanatical and hysterical excitement; it is no more true madness than the excitement gradually wrought up on political questions, until at length we have the fury, rage and brutality of a mob, and the fearful tragedies of nihilism and revolutionary violence.

Mere feelings and emotions or the madness of passion,

are not disease, nor of themselves the producers of disease.

Some years ago a woman was brought to the asylum in a state of profound melancholy, her mind dwelling wholly on spiritual subjects. She had resorted to fasting and prayer in the delusive expectation that her only child, who had died, might be brought to life. She had before this given herself up to grief and indifference to duty; had got away from her home and spent whole nights kneeling on the grave of this child. Was it strange that her health should at last give way, and that she should sink into mental derangement?

Many years ago a young minister preached two sermons every Sunday, superintended a Sabbath School, held two or three meetings a week in his church, wrote for the religious press, visited as pastor the members of a large congregation, limited his food, and trenched by study upon the hours of sleep. He finally failed in health and passed into acute mania, raving only on the subject of religion; lost his own identity; declared himself Zerubbabel; that he was appointed of God to preach "to the spirits in prison;" that he had descended into hell, and there had preached the gospel of salvation and redemption. This was not Religious Insanity, but insanity from exhaustion, religion having nothing to do with it except to give tone and character to his delusions. He recovered and spent a long and useful life as a conservative minister of the Gospel. A distinguished lawyer whose labors and privations broke him down in health, passed into profound melancholia, declared that he had ruined his family and that his soul was lost.

Would you charge this to religion, to law, or to exhaustion?

The only comment to be made upon such cases is,

that they should not occur. They are all plainly within the scope of preventive measures. No such neglect and abuse of simple laws of health are justified, certainly not at this day. There are men and women all around us, in this city, and perhaps in this audience, who have stood at the furthest verge of mental unbalance; depressed in spirits, every thing about them clouded, suicidal thoughts coming and going, but who, being assured that impaired health was at the bottom of their misery, were willing to submit themselves to enforced eating, quiet and rest, and necessary medication in hope of restoration, and who could testify that when health was regained their delusive ideas vanished "as a dream when one awaketh."

A vast concourse of cases press upon my mind, but I forbear to detail them, only wishing to impress by sufficient illustrations the truth that insanity is only a bodily sickness which disturbs mental action, and that taken in its inception, it is very amenable to treatment; that insanity is born only of ill-health. Like fire that a pail of water may quench in the beginning, but neglected may defy all means, so it is with this disease, but with this difference in its favor, that every man and woman has within reach, the means of timely avoidance or prevention.

INTEMPERANCE AND DISSIPATION.

Man is asked, and perhaps not unreasonably, to rise superior to his surroundings, his appetites and passions, and bring himself into obedience to the laws of nature within him; to direct his appetites and passions in their natural course and under such restraint as will lead to usefulness, happiness and the elevation and progress of the race. Philosophy teaches as much as this. Even in savage life he is aided in the struggle for existence by

laws of custom maintained for mutual and general safety, giving some scope for mental culture and the development of moral being. How much more under Christian civilization which maintains unity of interest and mutual help. But, if he had only himself to look after, and the means about him were wholly under his control, he might accept philosophy.

Nature, indeed, sets before him an example of unswerving obedience to law, but man sees that the individual plant in its life is interfered with by accident, and by its surroundings, marring and often destroying, not only its growth and symmetry, but its existence. The majestic oak falls before the sweeping tornado or is riven by lightning, or its life may be gradually and insidiously sapped by so small a power as an insect, or worm, or it may be wounded by the thoughtless or ruthless stroke of an ax, and under the action of the elements disease may set in, and from such starting point compass its death. We see that while it is true that nature is everywhere in obedience to immutable law, there is also an apparent, if not real, incessant strife for individual existence. The man to whom the life of the oak is of sufficient consequence, either for his gratification or his use, may guard it from the ravages of the insect, the worm, or the ax, but not from the force of warring elements.

So man may guard himself from the moth of idleness and indifference, from the evil sway of consuming appetites and passions and the corroding cares of life, and in a measure from the ruthless and envious assaults of malice, and may secure himself amid the inclemency of the elements about him, but he stands exposed among his fellows as the oak is exposed to the elements of nature, and in incessant strife for individual existence.

But it is not the great calamities of life which men have most to fear, or which do the work in breaking down men and women, but the persistent gnawing of cares, the strain of the legitimate duties of life, and the causes I have heretofore referred to—the indulgence of consuming vices which pamper the appetites and passions, and thus sap the vital energies and dethrone self-respect, and engender disease.

Intemperance—I only have time here to refer to one of the forms of dissipation—intemperance. The legitimate use of alcohol, in its various forms, must be recognized by all medical men having experience. And it is not too much to say that its misuse as an intoxicant is as thoroughly understood and condemned by them as it can be by any class of persons. Nor do I feel called upon on this occasion to discuss the radical question of its total disuse because of the liability to abuse.

While intemperance does not show a large percentage among the direct causes of insanity, yet indirectly it must be considered as a prominent cause of mental unbalance, especially in its influence in breaking down the general health and producing paralyses, apoplexies, and paresis, as well as by its pauperizing power, bringing families into conditions of neglect, starvation, over-toil and exposure, and in this direction it certainly is a fearful cause.

Intemperance seems to be the opprobrium of civilization. Strange to say, the strong and brilliant seem often to go down faster and more surely under the influence of dissipating habits and vices, especially drinking, than the dull and mediocre. Indulgence with them is full of zest and enjoyment, despite the remonstrances of conscience which is always condemning them. To them giving way seems in most instances death in life; only the beginning of a tragic end to

come sooner or later. To many of the most highly gifted there often seems to be a strange, fatal fascination in the unnatural excitement of dissipation in drink, which carries them on with little or no resistance. Once the cup drained to the dregs, and all reasoning and warning seems unavailing; a thousand ghostly forms of friends who had perished under the same evil spell might appeal to them but in vain. Nothing is too absurd, nothing too degrading, nothing too base and foolish in this line of conduct. To them drink is the lute of Orpheus.

“ Whose golden touch could soften steel and stones,
Make tigers tame, and huge leviathans
Forsake unsounded deeps to dance on sands.”

Here we have the greatest and most piteous wrecks of mind. Not a few, but always a vast procession. The steady, constant drinker is gradually poisoned, it is true, if he takes a quantity which the system is unable to dispose of, but at the same time the system itself becomes tolerant of the poison. I recently saw a young woman who took seven grains of morphia a day, and a man who took twenty grains a day, either amount greater than would be required to destroy human life in the beginning. Neither of these persons was comfortable without the drug. A gentleman once told me that he had become so addicted to drink that he could not do with less than half a pint of whisky before breakfast and from a pint to a quart between that and the following morning. With this amount he was undoubtedly under the influence of alcohol, but he was not what would be called perceptibly intoxicated.

The regular heavy drinkers are not apt to become insane, but they are more liable to the development of other diseases, especially of the liver, kidneys and lungs and to apoplexies and paralyses, in consequence of

degeneration of the arteries. If to more or less steady drinking an occasional debauch is added, insanity is likely to occur. But apoplexy or suicide is quite as likely, the latter a too common end of such a life. Suicide does not generally occur in the midst of an excess of drinking but at the close, when they "see themselves as others see them." Shame and remorse are possible then, because they are able to contrast a past with the present.

I have already referred to the influence of drinking on the young. In them its deleterious influences are not confined to the body, but go further, and induce weakening of the mind and moral degradation. Youth under the influence of stimulants are in an unnatural state, which prevents them from thinking and perceiving things truly, and they drift on, perhaps often unconsciously, into follies of thought and action, into idleness, indifference, selfishness, disregard of truth, and finally into dishonesty and loss of all self-respect.

A vast number of young men with the best opportunities and possibilities in themselves for honorable lives of usefulness are thus wrecked long before reaching full manhood. A proportion of them break down and die of lung disease, largely from exposures, while others lose mental tone and wholesome ambition, others become weak-minded and finally demented, and others again fall into criminal modes of life. Unfortunately, the young do not seem to realize that self-control is a high essential to influence and character, and that it grows only under exercise and experience. They are first betrayed by self-confidence, and then allured by the physical pleasure and the *abandon* which intoxicants give into deeper and deeper paths, and thus, as I have said, at last sink into dishonor and are lost to truth, virtue, decency, filial respect and regard for the rights of others.

My observation is that the moral degradation is more apt to take place where drunkenness commences in youth than in those who become intemperate later in life. In the latter the character has become developed, and the ideas of right and wrong are formed before they have come under the delusive influences of semi-intoxication.

It is a sad reflection that out of a hundred young men who go out into the world full of promise, yet unmindful of what dissipation is, under the power of appetite, and flatter themselves that they can keep up indulgence and hold themselves within reasonable and safe bounds, fifty fall in the early skirmishes of life before its battles really begin. I do not care to think how small the number is of this class who reach full life with the appetite under successful control. Happy for these if before reaching the last stage they are fortunate in finding death.

It is said "offenses must come," and men are too often inclined to take this as an excuse for shortcomings and defects, and think that after all they are only one among the multitude. Effort, indeed, is too often a failure, because the individual himself has only vague ideas of what he is undertaking to conquer in himself, and still less knowledge of the essential external influences he has to contend with. He starts to overcome with his will the deeper influence of appetite imbedded in his nature. His real weakness he either does not appreciate or he palliates it. His appetite may not have the consent of his will. His determination and will may be against it. What then becomes his weakness? The answer will have been in part anticipated: temptation. Nine chances to one he will construe the only remedy for temptation to mean: "Keep liquor away from me and

keep me away from liquor." This is essential, but it is only a part, and a very small part when the will is relied on as the main safeguard. He must put his personality in the scales on his own side.

A man who abandons himself is inevitably lost. When he begins to listen to pity and to pity himself, he not only becomes pusillanimous, but a helpless and hopeless drift-wood in the current of appetite. If he would accomplish anything for himself he must, in his sober moments, rise to the dignity of asserting: I am still a man and will be my own master.

Leaving out for the present the moral considerations, what is the greater safety against drinking? It surely must be in the surroundings, socially, the conditions of bodily comfort which preclude any pressing sense of the need of stimulants. I heard a laboring man say some time ago that a quart of skimmed milk with his dinner, when away at work, soon brought him where he did not feel the want of beer. I am satisfied that the want of a proper beverage is one of the most controlling adverse influences with those who are honestly anxious to avoid or overcome the appetite for strong drink. *Feed the natural appetite and provide for the needs of the body, and thus secure the power of preventing the feeling of the need of stimulants.*

Occupation, too, is another prime safeguard. This begets the need of nourishment and food, and helps do away with the feeling of the need of stimulants. Some years ago I was told by a sugar refiner, that the use of oatmeal water or thin porridge saved a great many of the men from intemperance. The men working in such a temperature required fluid, and a large amount of water disturbed digestion, and beer was too often resorted to. The oatmeal water happily came in as a healthful substitute. I was told by a lady in Scotland

that thin oatmeal gruel or oatmeal water given to her laborers, gradually displaced the beer which they thought they could not get along without.

MATERNITY.

There is one important subject connected with causation which perhaps directly or indirectly produces more insanity than any other—insanity connected with maternity and with the over-toil, the loss of sleep, the neglect and defective nourishment after childbirth.

Experience teaches us that of all forms of insanity, that form which abruptly converts what ought under normal conditions of personal hygiene to be a time of exceeding joyousness into one of infinite sorrow is the most distressing to all concerned. Death itself is oftentimes less terrible to the grief stricken family. I am persuaded that there is scarcely any department of preventive medicine in which prophylaxis is so deplorably neglected as in the care and treatment of this class.

On the 14th day of January, 1885, two mothers were brought to the asylum together. One had five children, the youngest three months old. The other had one child eight years of age. The first was a case of mania, the second was a case of melancholia. Both lost mental balance within a few weeks after the birth of the child.

The first was incoherent, laughed to herself, expressed no interest or anxiety in her children, wandered from one subject to another, but when her attention was held and she was questioned, she was able to answer, and between herself and her husband her history was obtained. She was an active, vigorous, energetic little woman; had done her own housework, was strong and healthy at the birth of her other children as well as at

the birth of the last. She got up after two weeks, and began to do her work. The four children were taken with whooping-cough, and finally the baby also. This kept her awake, up often at night, and then for six weeks she was deprived largely of sleep, was anxious, worked constantly, took little food, because, as she said, she "did not feel like eating, and felt weak and trembling." She knew she was sick, and felt that she ought not to do so much, had headache, heart pain, faintness—all warnings of nature, but kept on. One day she felt a strange feeling about her heart and in her head. Then a wandering of the mind; and from that time lost self-direction and passed into insanity. She was pale, wasted in flesh, seemed like a person half dazed and in a waking dream, but insisted she was not sick.

The other was in good health at the birth of her child, and the boy, a fine, healthy little fellow, was with her. She got up within three weeks to do her housework, nursed and took care of the baby, and ran down in the same way as the other, but by slower stages, and sank into depression and unhappiness, with periods of melancholia more or less severe, and after the long struggle of eight years passed into profound melancholia with unhappy delusions and a desire to get out of this life. Had motherhood necessarily anything to do with the insanity in these cases? No. The history of both shows that it came from readily preventable conditions. Almost a crime against nature.

These are not exceptional cases, but too common. We make laws to protect animals against abuse and negligence and ignorance, and it is humane to make them and to enforce them. In all the range of human affairs there is no neglect, no wrong, no cruelty, that

compares with the neglect and ignorance associated with motherhood. A woman about to become a mother stands in the most sacred relation human life presents. Neglect is so common that it passes current. It may be said to be expected.

The facts of experience show that this neglect and ignorance constitute a direct cause of insanity in a large number of cases, and in a vast many more an indirect cause by first breaking down the general health. In these ways motherhood is made wrongfully to become a prolific cause of insanity; of mania, of melancholia, of suicide; yes, of homicide. What a wrong! A wrong that cries to Heaven day by day, but seemingly in vain.

There is a subject kindred to this of which, in this relation, I ought to speak. Passing from motherhood we come to a too current sentiment productive of infinite evil. I mean the sentiment which leads men and women to try to believe that home can be a place of more comfort, and life happier, without children. The effect of such a hideous sentiment on life and society is appalling. For women there can be no more fatal error than to yield to the temptation to enter upon so unholy a compact. I look back through the pages of experience written, yes, burned into my mind, and see the long list of insane proceeding directly and indirectly from this cause. I sometimes question if even the evils of intemperance are greater than those to which I now refer. It is true that the sweetest, loveliest, most prudent and care-taking women sometimes become insane. Yes; but this is the occasional accident of life.

The greater number, and among them such cases as I have mentioned, sink into unbalance of mind, under the too great burden of life's duties with those of maternity.

What have we to contend with to avert such an evil? We have ignorance and indigence to contend with, and against these to initiate a system of preventive measures, to instruct and aid the ignorant and poor.

Physicians recognize this, and among the opulent and well-to-do it is not difficult to secure proper care. Among the indigent and poor, with whom life is at best a struggle, this can not always be accomplished without aid.

First as to ignorance. If women really knew better, a large number would save themselves more than they do, and if men had an intelligent appreciation of these matters, their wives would be better off.

There must be few men that are fit to be called husbands, who, if they understood, would not only acquiesce and aid in the instructions of the physician as far as possible, but make any personal sacrifices in addition, to shield their wives from undue labor under any circumstances, and especially under such and with such a possible outcome.

Some time ago a man of very moderate means brought his wife to me for examination and medical advice. She was quite broken down in health. After going over the case carefully I said: "After all, the most important things are good food and rest; and without these everything else is of doubtful value. Your wife should have absolute rest for at least three months." She said quickly: "I don't see how this can be done, for we are not able to hire help." Said the husband: "Yes we will do it. I will make myself able. I will sell one of the cows, and I will work harder myself. This was the spirit of a man worthy the name of husband, and he *did* make himself able.

I do not feel it necessary to expatiate upon this sub-

ject, as the facts are too patent. Is there a remedy for the better protection of maternity? I have long had in my mind the idea of an association for this work—I will not say charity. It is no more a charity than the organization of a church is charity. One is an organized association for the instruction and aid of people in their religious duties, the other would be simply an organized association for instruction and aid in maternal duties. In two instances I have endeavored to enlist men with large means who were contemplating benevolent disposition of their fortunes, but I did not succeed, though I have always believed that I should have succeeded in one case if death had not come suddenly and unexpectedly. In my conversation with this gentleman one of his questions I remember was: “Would it not require a great many nurses?” No; I would simply suggest the employment of suitable women of the same social class to do the housework and be paid for it by an association; such an association, under the notice of a physician in all cases, to furnish such aid. It would not be a public, but a private and unpretentious, mode of work. If women knew they would have all needed care—not in a hospital with its necessary publicity and separation from home, but in their own homes and among their families and without the notoriety of their condition, what a burden would be lifted, what health saved, and what insanity prevented. What a long list of mothers with the sad history of neglect and toil and abuse come before me. Yes, driven into madness under the very shadow of the church. I have looked into hundreds of pale and haggard faces and in my heart I have said a thousand times: “What victims of inhumanity.”

I have said that ignorance, indigence and poverty would have to be met, because they are, among such

conditions as I have referred to, the remote causes of insanity.

If it were thoroughly known and understood that nature demanded and needed time for restoration, and what the dangers from neglect were, and that needed assistance was always at hand and tendered by a responsible association, it would be hailed with favor, and the work would save a large number of mothers from broken health, and cut off the real source of insanity in a vast many more. I would lay down this proposition: For at least a month after childbirth no woman should be subject to toil, or worry or anxiety, and surely not to want of food and care. The history of asylums and hospitals shows the sad train of evils and sorrows which come from such neglect and from the other point to which I have alluded, and so conspicuously, that the subject ought to command the attention and practical co-operation of the benevolent and thoughtful people of all classes. If I could whisper in the ears of every young man in this house: "It is your mother who is silently suffering," would any one turn a deaf ear? No. If he did he would be unworthy the name of man. It is a mother. Somebody's mother. Oh, men and women shall we leave such a wrong unrighted?

You may think, on this occasion, perhaps, I ought not to have brought this subject before you. I have done so because, as I have said in the outset, it is one of the commonest causes of insanity, and one which is as largely preventable as any other. Besides I have heard the wail of sorrow come up from too many households of neglected mothers to keep silent. I have looked into the meaningless eyes of too many mothers lost by such neglect to stay my voice. Certainly there could be no more meritorious association, no higher

recognition of the dignity of woman. Let us do this work and be spared the pain and the worry of such cases as I have related. Let us accept it in the catalogue of unquestioned duties; not of charity, but of human impulse, emanating from a sense of common duty to humanity. Let us see in these our mother and our sister.

“I was an hungered and ye gave me meat; I was thirsty and ye gave me drink; I was a stranger and ye took me in; naked and ye clothed me; I was sick and ye visited me; I was in prison and ye came unto me.”

So that on the great day of Assize when we ask, when saw we the Prince of Life hungry, or thirsty, or a stranger, or naked, or sick, or in prison, and ministered unto him, we shall hear those wondrous words of approval:

“Inasmuch as ye have done it unto one of the least of these, ye have done it unto me.”

PROCEEDINGS OF THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMER- ICAN INSTITUTIONS FOR THE INSANE.

The Thirty-ninth Annual Meeting of the Association was called to order at ten o'clock, A. M., Tuesday, June 16, 1885, at the United States Hotel, Saratoga, New York, by the President, Dr. Pliny Earle.

On motion of Dr. Gray, Dr. C. F. MacDonald was chosen Secretary *pro tem*.

On motion, the reading of the minutes was postponed until the arrival of the Secretary, Dr. Curwen.

The following members were present during the session :

J. B. Andrews, M. D., Buffalo State Asylum for the Insane, Buffalo, N. Y.

J. P. Bancroft, M. D., Asylum for the Insane, Concord, N. H.

J. W. Barstow, M. D., Sanford Hall, Flushing, L. I.

W. J. Bland, M. D., Hospital for the Insane, Weston, W. Va.

J. E. Bowers, M. D., Hospital for the Insane, Rochester, Minn.

J. P. Brown, M. D., Lunatic Hospital, Taunton, Mass.

H. A. Buttolph, M. D., Short Hills, N. J.

J. H. Callender, M. D., Hospital for the Insane, Nashville, Tenn.

John B. Chapin, M. D., Pennsylvania Hospital for the Insane, Philadelphia, Penn.

P. Bryce, M. D., Hospital for the Insane, Tuscaloosa, Ala.

Walter Channing, M. D., Brookline, Mass.

R. C. Chenault, M. D., Eastern Lunatic Asylum, Lexington, Ky.

Daniel Clarke, M. D., Asylum for the Insane, Toronto, Ontario.

Edward Cowles, M. D., McLean Hospital for the Insane, Somerville, Mass.

John Curwen, M. D., State Hospital for the Insane, Warren, Penn.

A. N. Denton, M. D., Hospital for the Insane, Austin, Texas.

Joseph Draper, M. D., Asylum for the Insane, Brattleboro, Vt.

Pliny Earle, M. D., Lunatic Hospital, Northampton, Mass.

Orpheus Everts, M. D., Cincinnati Sanitarium, College Hill, Ohio.

A. M. Fauntleroy, M. D., Western Lunatic Asylum, Staunton, Va.

C. M. Finch, M. D., Asylum for the Insane, Columbus, Ohio.

Theo. W. Fisher, M. D., Lunatic Hospital, Boston, Mass.

T. M. Franklin, M. D., City Lunatic Asylum, Blackwell's. Island, N. Y.

J. Z. Gerhard, M. D., Pennsylvania State Lunatic Hospital, Harrisburg, Penn.

H. A. Gilman, M. D., Hospital for the insane, Mt. Pleasant, Iowa.

William B. Goldsmith, M. D., Lunatic Hospital, Danvers, Mass.

John P. Gray, M. D., State Lunatic Asylum, Utica, N. Y.

W. B. Hallock, M. D., Cromwell Hall, Cromwell, Conn.

G. H. Hill, M. D., Hospital for the Insane, Independence, Iowa.

Edwin A. Kilbourne, M. D., Hospital for the Insane, Elgin, Ill.

C. W. King, M. D., Asylum for the Insane, Dayton, Ohio.

J. D. Lomax, M. D., Marshall Infirmary, Troy, N. Y.

S. B. Lyon, Assistant Physician, Government Asylum, Washington, D. C.

C. F. MacDonald, State Asylum for Insane Criminals, Auburn, N. Y.

H. P. Mathewson, M. D., Hospital for the Insane, Lincoln, Neb.

C. A. Miller, M. D., Longview Asylum, Carthage, Ohio.

T. J. Mitchell, M. D., Lunatic Asylum, Jackson, Miss.

J. D. Munson, M. D., Assistant Physician, Pontiac, Mich.

P. L. Murphy, M. D., Western, N. C., Insane Asylum, Morganton, N. C.

C. H. Nichols, M. D., Bloomingdale Asylum, New York.

George C. Palmer, M. D., Asylum for the Insane, Kalamazoo, Mich.

H. K. Pusey, M. D., Central Lunatic Asylum, Anchorage, Ky.

C. A. Rice, M. D., East Mississippi Insane Asylum, Meridian, Miss.

A. B. Richardson, M. D., Asylum for the Insane, Athens, Ohio.

F. E. Roy, M. D., Lunatic Asylum, Quebec, Que.

Ira Russell, M. D., Winchendon Highlands, Mass.

B. T. Sanborn, M. D., Hospital for the Insane, Augusta, Me.

John W. Sawyer, M. D., Butler Hospital, Providence, R. I.

S. S. Schultz, M. D., State Hospital for the Insane, Danville, Pa.

A. M. Shew, M. D., Hospital for the Insane, Middletown, Ct.

Henry P. Stearns, M. D., Retreat for the Insane, Hartford, Ct.

J. T. Steeves, M. D., Provincial Lunatic Asylum, St. John, New Brunswick.

W. H. Stokes, M. D., Mount Hope Retreat, Baltimore, Maryland.

J. Strong, M. D., Asylum for the Insane, Cleveland, Ohio.

S. H. Talcott, M. D., State Homœopathic Asylum for the Insane, Middletown, N. Y.

A. J. Thomas, M. D., Assistant Physician, Indianapolis, Ind.

H. Wardner, M. D., Hospital for the Insane, Anna, Ill.

J. W. Waughop, M. D., Hospital for the Insane, Fort Steilacoom, Washington Territory.

P. M. Wise, M. D., Willard Asylum, Willard, N. Y.

Dr. Gray, on behalf of the Business Committee, stated that they had made full arrangement with the proprietors of the United States Hotel for the comfortable accommodation of the members during the meeting of the Association.

DR. GRAY. The Committee suggests that we arrange, during the course of this session, for a trip to Fort Ticonderoga and down Lake George. The trip could be made in one day, starting about ten in the morning and returning some time in the afternoon. We have a proposition from the company agreeing to take all the members and their friends for two dollars the round trip. The Business Committee would suggest that Thursday be the day selected for that purpose, and that to-day and to-morrow be given wholly to the reading of papers and the other business of the Association. I think the proprietors of the steamship line on the lake would like to have us take early action on this matter, and I hope, therefore, that the Association will come to a conclusion to-day, that we may be able to inform them as to what is agreed upon.

DR. ANDREWS. I would like to say further, Mr. President, that the company is anxious to have some idea of the number that will participate in this excursion. The rates have been put down very low. The regular fare for the round trip is seven dollars. They have made us this offer of two dollars, which is the lowest they have ever made. The trip is to go to Fort Ticonderoga by rail, following the line of the lake twenty-five miles, then cross the

lake, taking the steamer to the Fort William Henry Hotel, and from there home by rail. The time for starting will be ten or ten thirty, and for returning six or six thirty in the evening. The Business Committee would like to have some idea of the number who will pledge themselves to go on this excursion. They would like the number to be sixty at the lowest, and as many above that as possible. If the gentlemen present will indicate their decision in the matter, I think it would be well. The committee prefer to lay this before the Association rather than to make any positive arrangement with the company beforehand.

Dr. STRONG. I move that the proposition be accepted.

Carried unanimously.

Dr. EARLE. Can any measure be taken for ascertaining the number that will participate?

Dr. GRAY. Dr. Andrews of the committee will assume the duty of ascertaining the number.

Dr. Gray moved that the physicians of Saratoga and vicinity be invited to the sessions of the Association.

Carried.

Dr. GRAY. The Business Committee would suggest that the names of managers or other representatives of institutions known to regular members be given to the Association, that it may be able to invite them to participate in the deliberations of the Association.

Dr. SHEW. Mr. President—It gives me great pleasure to introduce to you and the Association, Rev. Samuel G. Willard, who has been secretary of the Board of Trustees of the Connecticut Hospital for the Insane since its organization in 1866, and has also some claim to the friendship of this Association, from the fact that his brother, whose memory we all esteem, Dr. Willard, of Albany, was instrumental in forwarding the interests of the asylum at Willard which now bears his name.

Dr. PALMER. I take great pleasure in introducing to you Dr. Foster Pratt, member of the Board of Trustees at Kalamazoo; also Warren G. Vinton, of Detroit, President of the Board of Trustees of the Eastern Michigan Asylum; also Dr. James D. Munson, the Assistant Medical Superintendent of that institution, who comes in place of Dr. Hurd.

Dr. GRAY. Are there any other representatives? Dr. Munson

vania, and former Secretary of that Board, is present. I move that the usual courtesies be extended to him by the Association.

Carried.

On motion of Dr. Gray, the minutes of the previous meeting were read and approved.

The Secretary read a communication from Dr. H. F. Carriel expressing his regret at not being able to attend the meeting; also one from Dr. Godding, of the Government Hospital for the Insane, to the same effect, and presenting Dr. S. B. Lyon, as representative of that institution to the Association.

The Secretary then announced that the President had appointed the following committees:

Nominating Committee: Drs. Gray, Schultz and Bryce.

Time and Place of Next Meeting: Drs. Draper, Kilbourne and Mitchell.

To Audit the Treasurer's Accounts: Drs. Clark, Franklin and Chenault.

On Resolutions: Drs. Chapin, Fauntleroy and Schultz.

A recess of fifteen minutes was then taken to enable the Committee on Business to prepare their work.

The Association was called to order at 12 o'clock, and the Committee on Business announced the following programme of the work of this meeting: That the sessions of Tuesday and Wednesday be devoted to the reading of papers; Thursday take an excursion to Ticonderoga and Lake George; in the evening hold a session for business. That the sessions of Friday be devoted to the reading of papers.

Dr. GRAY. Mr. President—On the part of the Nominating Committee I would report that we recommend for President, Dr. Everts, of Ohio; for Vice President, Dr. Buttolph, of New Jersey; for Secretary, Dr. Curwen, of Pennsylvania.

Dr. NICHOLS. I move, Mr. President, that the report be accepted and, as was the case last year, that the acceptance carry with it the election of those officers.

Carried unanimously.

Dr. KILBOURNE. Inasmuch as I have preferred a request that the Association go to Chicago next year, and Dr. Chenault has offered a similar request that the Association should go to Lexington, I think it would be but an act of courtesy to him that I should ask that my name be withdrawn from the Committee on Time and Place of Next Meeting and some other substituted. I therefore, now make that suggestion.

Dr. Earle, the president, then appointed Dr. Catlett, of Missouri, in place of Dr. Kilbourne.

Dr. Earle then read his address as President of the Association, after which he said it only remained for him to introduce his successor for the ensuing year.

Dr. Everts on taking the chair said :

I have but a word of thanks for having been called to this honorable position, so much more than anything I had ever aspired to. To be worthy of it is as high an honor as any of us can aspire to. I thank you sincerely for the honor conferred.

Dr. GRAY. Mr. President—I would suggest that if any of the members who propose to take the trip to Lake George have not yet so reported to Dr. Andrews, they do so during the recess, so that all details of the excursion may be attended to.

The Secretary requested that all members attending the sessions present their names to him that he might have a complete list.

The Association then adjourned to 3 P. M.

The Association was called to order at 3.45 P. M., by the President, Dr. Everts.

Dr. CURWEN. Before proceeding to the regular business of the meeting I would like to call the attention of the members to the book which I have in my hand, which is an enlargement of the address I delivered last year on the original members of the Association. I have had it printed in full with the photographs of the thirteen original members. I have only a sample copy with me, but any gentleman wishing a copy will please leave his name with me and I will send it to him after my return. The book

will cost five dollars; the photographs themselves cost a great deal more.

Dr. Curwen read a memoir of Dr. Kirkbride.

Dr. Richardson from the Committee on Necrology, before presenting his report, said:

Mr. President, I am not the chairman of the committee, but I was recently informed that Dr. Grissom would not be present and I was unable to communicate with Dr. Cowles as he was absent some three weeks. From what information I could gather there occurred only one death during the year, that of Dr. Reed, of Dixmont. If I had had time to consider I should have taken a different course; that is I would have asked some one better acquainted with Dr. Reed to prepare a biographical notice of him. As it is, I have procured what information I could from the family and have written a short memorial; but I would make this request; that members of the Association who knew him more intimately than myself, and who were with him during the year, would supplement this by further remarks and particularly those describing his relations with this Association, of which I know comparatively nothing.

Dr. Richardson then read the memoir.

Dr. NICHOLS. If I have observed correctly, no action was taken at the close of the reading of the memoir of Dr. Kirkbride as to whether it should be spread *in extenso* upon the minutes of the Association. It will be remembered that a memoir was included in full, in the minutes of the meeting of the Association last year, which were read at the opening of this meeting, and it seems to me that some definite course should be agreed upon in this matter, either that the the two memoirs that have just been read should be spread upon the minutes of the Association in full—for which the precedent seems to have been established—or that there should be a distinct understanding that hereafter that should not be done. Now that the Association has become so large, if these memoirs are included in full in the minutes of the Association they are likely to seriously encumber them. I hardly need say that I should be, perhaps, as jealous as any member present of any discrimination against the memoirs that have just been read, but it seems a proper time for the Association to take some definite action in regard to this matter.

Dr. CURWEN. There was a committee appointed last year, not only to prepare this memoir but to collect all that was said in regard to Dr. Kirkbride and publish it.

Dr. NICHOLS. I did not recollect that precisely that was done. It seems to me that that action in respect to which the Secretary must be correct opens a way out of this difficulty, and I move, Mr. President, that the fact of the preparation and reading of both of these memoirs be recorded in the minutes, and that they both be printed and published for the use of the Association, as directed last year.

Dr. Nichols' motion was carried.

The President then announced that the report on Cerebro-Spinal Pathology by Dr. Daniel Clark would be the next order of business. He stated that the report was prepared for last year's meeting, but owing to Dr. Clark's inability to attend, it was postponed until this meeting.

During Dr. Clark's temporary absence from the room, Dr. Chapin introduced George W. Jones and Judge Mason, two trustees of the Willard Asylum, to the Association, and on his motion, they were extended the courtesies of the floor.

Dr. NICHOLS. Mr. President—While the Association is waiting for Dr. Clark I wish, with your leave, to refer to the fact, as I remember it, that some years ago a resolution was introduced by Dr. Kirkbride to this effect:—that the Association did not hold itself responsible for any opinions expressed by readers of papers, unless such opinions were formally endorsed by the Association. I think I am right in regard to that, Mr. Secretary; and that resolution has occasionally been referred to, for the information of the younger members of the Association. I think it might be well to refer to it again, in order that the fact may not be lost sight of that such a resolution or rule is really a part of our constitution. The most of our constitution is an unwritten one, but I believe this rule to be a written part of it as it certainly should be. Is there any question, Mr. Secretary, in regard to such a resolution having been recorded?

Dr. CURWEN. There is some doubt about it. There has been some such thing in the minutes.

Dr. NICHOLS. Well; it certainly can do no harm to reiterate it, and I therefore move, Mr. President, that it be declared as the judgment, rule, fixed principle of the Association, I wish to make it quite strong, that the views and opinions of members of the Association expressed in papers that they may read, whether voluntary or reports of committees upon whatever subject, are not to be considered as the opinions of the Association unless they are endorsed or formally adopted by the Association. I suppose no member can fail to appreciate the importance of such a rule. Every now and then an utterance may be made that the Association would not, as a body, approve, and yet some person either inimical to the Association, or wishing to serve some special purpose, might bring it up before a legislative body or before some other Association, as the opinion of the Association of Superintendents, more or less to its detriment. I move you, that such a minute be put upon record at this time.

Resolved, It is now the judgment, the rule, and fixed principle of this Association that such papers read by members of the Association shall not be considered as the views of the Association unless fully endorsed by the Association.

Dr. NICHOLS. A member suggests that views expressed by members in papers read shall not be considered as the views of the Association, unless an affirmative vote of the Association in their favor shall have been taken, and I accept the amendment to my motion.

The motion of Dr. Nichols as amended was carried.

Dr. Clark then read the report of the Committee on Cerebro-Spinal Pathology. (Printed in this number of the JOURNAL.)

At the close of Dr. Clark's paper, the report of the Committee on Cerebro-Spinal Physiology was called for:

Dr. WARDNER. The chairman of that committee, Dr. Gundry, being absent, I am sorry to say that I am not prepared to make any report for the committee. I supposed that the other members of the committee would be prepared. I am disappointed not to meet them here, although neither sent me notification they would not be present.

The PRESIDENT. Dr. Andrews will read a report on Therapeutics of Insanity and New Remedies.

Dr. ANDREWS. I have here a short paper on Loco, or California Rattle Weed, presented by Dr. Hurd, a member of the committee. He was unable to be present, and sent it to me to read at the meeting. I will preface my report with this paper of Dr. Hurd's. Dr. Hurd spent a short time in California for his health, and while there his attention was attracted to this plant, and he prepared this short paper.

Dr. Andrews then read the report of the Committee on Therapeutics of Insanity and New Remedies,* at the close of which discussion was had.

Dr. GRAY. I would like to say a word in regard to the therapeutic use of tea and the extract made by Dr. Squibb. Dr. Andrews has referred to the administration of a strong infusion of tea prescribed by me in certain cases when he was an assistant at Utica. I have given it to children in conditions of partial collapse after exhaustion, the result of diarrhœa and in semi-coma from over-heating, where the action of the heart was feeble, and to adults after prostration by the heat of the sun. I have found nothing more useful in such cases than tea as strong as it could be made, giving two or three teaspoonfuls every hour or more if required. I have given it also to old people with weak heart in combination with a little whiskey or brandy. Either added to the infusion will preserve it for a few days while being taken, though it is quite as well to make it fresh each day. Some sixteen years ago I tried also very strong coffee for the same conditions, one case being that of a young man who had almost constant headache from meningeal hyperæmia following the sunstroke, and whose heart was irregular and feeble in action. I had a druggist in the city procure the very best quality of coffee, carefully browned and ground very fine, and the infusion made by filtering until he had as strong an infusion of coffee as could be obtained. I used this in combination with elixir of gentian, giving ergotin night and morning, and with good results. I have used it since frequently for a similar class of cases, especially with disturbed and feeble heart. I have administered an infusion of coffee in connection with elixir of cinchona, or combined with whiskey with great benefit. I took the infusion of tea myself experimentally at the first time spoken of in very large doses.

In respect to the camellia, some time ago, when it first came out,

* This paper will be published in the October number of this JOURNAL.

I procured some of Dr. Squibb's extract, and took a teaspoonful at a dose in a little cream about ten in the morning and at two and five in the afternoon. After continuing this three days I took two teaspoonfuls one day at the same hours, and afterwards three at a dose. I found the first day that there was no diminution in the number of respirations, but that they were fuller and the pulse was lowered in frequency, but increased in fullness. It gave me no sensation of discomfort in the head, and was rather stimulating. It induced slight perspiration the first day, but did not then or afterwards increase or diminish the action of the kidneys. On the second and third days it produced greater perspiration, and at times a sort of bounding of the pulse and reduced its frequency. The fourth day, after three teaspoonfuls were taken at a time, profuse perspiration was induced with a sense of lightness of the head and a little uncomfortable feeling when sitting up. I was not drowsy or anything of that kind, but on the contrary, felt stimulation, but also a little swaying when standing or walking, and I did not pursue further the investigation. At no time did I take beyond three teaspoonfuls of Squibb's extract at a dose. At one time the pulse fell to 56. It will be observed I kept the use of the tea continuously through the day, and the pulse did not resume its normal standard, which with me is from 69 to 74, until 9 or 10 o'clock in the evening. When taking the large doses the breathing was slower, but the inspirations were full. It produced neither headache nor nausea. A week afterwards I tried a pitcher of strong tea taken in large doses in the afternoon and evening, aiming to get as much as would equal a teaspoonful dose of the extract each time. Whether I got that much or not, I certainly did not get the same effects as from the extract; simply the stimulating effect of tea with a little fullness of the head and, after going to bed, profuse perspiration.

Dr. NICHOLS. Did you sleep on strong tea, Doctor?

Dr. GRAY. Yes; I went very quickly to sleep on going to bed. My idea was that it would keep me awake, but it did not. I not only went to sleep, but slept very soundly.

Dr. CHAPIN. Referring to that portion of Dr. Andrews' report which relates his experience in the use of hyoscine, I think we are under obligations to him for bringing to our notice this new remedy, as well as for the careful observations he has reported. All experimental results fairly obtained have great value. For several weeks I have had the opportunity of observing the effects of hyoscine, and am able to confirm, to a great extent, the

favorable results Dr. Andrews has reported. Some of the unsatisfactory experiences which have been noticed not only in the use of hyosine but hyoscyamine, may have been owing to the character of the leaves from which the alkaloids were obtained, as it is well known that the physiological effects of hyoscyamus differ according to the habitat of the plant. Two classes of patients have taken the drug—one made up of maniacal, noisy, excitable cases, with more or less motor activity; and the other class of melancholic patients, including those who were passive, but suffering nervous prostration and insomnia. The doses in the first class have rarely exceeded $\frac{1}{100}$ of a grain hypodermically, and in the latter class $\frac{1}{24}$ of a grain by mouth. These doses, it will be observed, are not as large as Dr. Andrews reports, and I would hesitate to administer as large a dose as $\frac{1}{50}$ of a grain without further experience. The first effect is to depress the pulse and respiration and reduce muscular activity, but when sleep comes it is refreshing, and lasts eight or nine hours. I have observed the excellent results from a dose of $\frac{1}{24}$ of a grain in insomniac patients. There has been no unpleasant complication or secondary effect, no dysuria, headache or nausea, attending its administration as stated. In comparing the effects of hyosine and hyoscyamine, it has been observed that patients do not acquire a toleration of the former as readily as the latter, and the same dose may be relied upon to produce the desired effect for a longer time without increase. I can not but hope that in this new drug—the hydrobromate of hyosine—we may have a valuable medicine for the relief of those insomniac conditions we have so often to deal with, as well as in the treatment of those maniacal states which present themselves at our asylums, and as such I wish to add my commendation of its use.

Dr. Curwen, the Secretary, then read an invitation from the New York State Pharmaceutical Association inviting the superintendents to attend the sessions of that body now being held at Congress Hall.

Referred to the Committee on Business.

The Secretary also read a letter from Miss Dix expressing her kindest regards to members of the Association.

Dr. Gilman stated that Dr. Catlett who had been

placed at the head of the Committee on Time and Place of Next Meeting, was not present, and that it was not certain that he would be. The President said if he did not arrive, his place would be filled in due time.

The Association then, on motion, adjourned until 10 o'clock, Wednesday morning.

The Association was called to order on Wednesday morning, June 17, by the President, Dr. Everts.

Dr. EVERTS. Dr. Earle has a report to make this morning.

Dr. EARLE. The committee to which was referred the question of opening the doors to membership of the Association to assistant physicians in the institutions for the insane, have given the subject their careful and thoughtful consideration, and hereby respectfully present their report.

This Association was formed in the comparative infancy of the great enterprise for the amelioration of the condition of the insane in the United States, and was called into existence by one of the shortest and simplest organic laws that ever gave vitality to the specific aims, actions and ends of a body of men united in a common and worthy purpose. Both psychology and psychiatry, not only among the people at large, but to the profession outside of institutions, were matters of almost universal ignorance. Even in the specialty there was, if we are not mistaken, but one physician who had an experience of ten years at the head of a public institution, and but five others whose similar experience exceeded five years. That of a majority of the superintendents ranged from two to four years. Of the eleven original members of the Association who were at the head of public institutions, the aggregate time of service in that capacity was about fifty-three years, or an average of less than five years each. But small as was the united term of practical work of the medical superintendents of hospitals, still those superintendents were the possessors of the greater part of the knowledge, by Americans, of the care and treatment of the insane, and hence, as well as from their position and their prospects of continuing in the specialty, they and they alone were the persons especially conspicuous as the proper candidates for membership of a society for the promotion of the cause.

Prior to that time there were few assistant physicians, and their experience was very limited. The position had previously been sought less frequently than of later years with the intention of continuing long in the specialty; and of all the physicians who then occupied that position, there were only two, so far as we can learn, who were subsequently promoted to the office of superintendent.

It is not necessary for us to attempt a detailed exposition of the wonderful progress of the psychopathic enterprise during the existence of the Association, and minutely to contrast the circumstances of the present with those of the past of forty years ago. You are all sufficiently familiar with the subject in general. In order, however, to bring it to your attention in perhaps a new, and certainly a striking aspect, as well as to adduce one of the strongest arguments in favor of the opinion to which your committee have arrived, permit us to present you with a few facts.

A little more than two weeks ago, letters were addressed to the superintendents of ninety-four public institutions in the United States and the British provinces, requesting the names of their assistant physicians, and the time of service of each of them, respectively. Notwithstanding the brevity of the intervening time, replies have been received from eighty-four of them, and the results of the inquiry are as follows:

In these 84 institutions, not less than 208 assistant physicians are employed, and their terms of service are indicated in the appended schedule, of which we will give only the general results. Less than 1 year in 35 instances. From 1 to 2 years in 38; from 2 to 3 years in 28; from 3 to 4 years in 20; from 4 to 5 years in 15; from 5 to 6 years in 14; from 6 to 7 years in 16; from 7 to 8 years in 13; from 8 to 9 years in 7; from 9 to 10 years in 4; from 10 to 11 years in 5; from 11 to 12 years in 3; from 14 to 15 years in 1; from 15 to 16 years in 3; from 16 to 17 years in 1; from 19 to 20 years in 1; from 20 to 21 years in 2; and, to cap the climax, 28 years in 1.

Since the above was written, we have received intelligence from an institution at which one assistant physician has been employed 32 years, and thus our climax is out-climaxed. Should that physician retain his position but two years longer, his term of service in the specialty will equal the united terms, at the origin of the Association, of Drs. Bell, Aul, Butler, Brigham, Kirkbride, Ray, Galt, Stedman and Earle—nine of the eleven original members who were at the head of public institutions.

These 209 assistants have performed their duties as such officers during an aggregate period of 918 years, or an average of four years four months and twenty-one days each, which is a little more than the average of experience of the original 13 members of the Association.

Such then, so far as relates to practical experience, are the claims of this large number of assistants to membership in the Association, and thus to be co-workers with us here, as they are at home.

Aside from these are many and diverse considerations which enlarge and strengthen this claim. Many of the assistants have come from the medical schools at a recent or comparatively recent date, bringing with them the advantages of the most advanced knowledge in the profession, and not a few have been trained in the general hospitals before their entrance into the specialty. As the boy is father to the man, so the assistant is father to the future superintendent, and, in the time to come, still more than in the past, the offices of physician-in-chief will be filled by men selected from the ranks of assistants, because, primarily, they have superior qualifications for that most responsible and important office.

When we regard, on the one hand, the actual members of the Association, and find, as we do at all times among them, a number, greater or less, whose practical knowledge of the specialty does not extend over a period of two years, and, on the other, a body of more than seventy* assistant physicians whose similar knowledge embraces the acquisitions of from five to thirty-two years, it is with no disparagement of either party, that we are led to ask if there is not a very easily perceptible trace of incongruity and inconsistency in the aspect.

It is a well-known fact that discoveries in science, improvements in art, and striking achievements in many of the spheres of human activity have been largely made in comparatively early manhood, the period of enthusiasm and of ambition, when toil is a pleasure, and investigation and research, even if they are devoid of more important fruitage, furnish their own reward. Shall we then, if sincere in our desire for the attainment of the ends which ostensibly we seek, still continue to keep a bolted door against this large mass of activity, energy and intellectual vigor which stands in patient expectancy without, awaiting that bidding to our companionship, the results of which will be beneficial, not alone to its

* Seventy-three of the assistants have served more than five years each.

possessors but to us as well, and ultimately, as we have abundant reason to believe, to the beneficent enterprise in which we are engaged?

Your committee offer the following as an addition to the organic law of the association:

Five years' continuous service as assistant medical officer in one or more institutions, the superintendents of which are members of this Association, shall entitle such assistant to membership so long as he shall continue in the specialty.

All of which is respectfully submitted.

PLINY EARLE,
ORPHEUS EVERTS,
JOHN CURWEN.

Dr. GILMAN. Mr. President—I have been very much interested in the paper of Dr. Earle, and I must confess that I am quite surprised at the large number of assistant physicians that have been in continuous service for five years or more. It seems to me there should be but one voice in this matter, and that is, that a cordial invitation be extended to those assistant physicians to join us in the work of this Association. For nearly twenty years I was engaged as an assistant physician, commencing in the hospital work as an attendant under my friend, Dr. Bancroft, of Concord, and after graduating in medicine, for sixteen or eighteen years with Drs. MacFarland and Carriel, of Jacksonville. I confess that during the last fifteen years of my service I felt the need of meeting together for general interchange of views and of obtaining that benefit which is to be derived from such a meeting. I remember that at one time the question was agitated of forming an association of assistants. We felt that we were debarred from becoming members of this Association and participating in the work, and that something of that kind would be decidedly beneficial in carrying forward our particular work. This proposition, however, covers the ground and I feel that the time has come when we certainly ought to invite these young men in with us. As has been stated, they are fresh from the medical schools, and with all the vigor of young manhood, are entering into a field of research the results of which we so much need. There is another point in this connection which it seems to me is patent to every one of us that have been engaged for any length of time in the work, and that is the matter of the selection of superintendents for new institutions as they are constructed throughout the country. By

bringing into this Association the assistant physicians, it brings them to the front; it presents a list of men who have had actual experience, from whom may be selected proper candidates for such positions. We have known in the past many disastrous failures in institutions from the selection of men without any actual experience in the work. I feel that this is an important matter and that by this action the Association will put this body of young men in a position where they will be more likely to be called to the new institutions as they are constructed from time to time, hereafter.

The proposition of the committee as reported by Dr. Earle, was then put to a vote and adopted.

The President then announced as the next order of business, the reading of a paper by Dr. Buttolph.

Dr. BUTTOLPH. I desire to improve the present moment, Mr. President and gentlemen, of expressing my regret at the circumstances which have, during the last three years, prevented my meeting you at the meetings of the Association, and also my pleasure that I have been able to attend on the present occasion.

The title of my paper is on the Physiology of the Brain and its Relations in Health and Disease to the Faculties of the Mind.

After reading his paper, Dr. Buttolph said:

I desire to say, gentlemen, what I consider a very important part of my communication in regard to this subject is that in which is included a short biographical sketch of Gall and Spurzheim; the facts in relation to their early methods, the progress of the science; all this is brought out very distinctly by resorting to matter relating to that period, and as this is not within the reach of all members of the Association, I desire on some occasion during the session to read a comparatively brief biographical sketch of these gentlemen in connection with what I have read.

Dr. EVERTS. As Dr. Catlett is not in attendance, I appoint Dr. Gilman in his stead on the Committee of Time and Place for Next Meeting, and I would suggest that the committee report as early as possible, as the Association will begin to diminish in numbers in a day or two, and it is better to report while a large number are present so as to get more general expression in regard to it.

Dr. GRAY. I desire, Mr. President, at this point to make some remarks in reference to the report of the committee on the

expediency of the admission of assistant physicians, as Fellows or members of this Association.

I was in favor of the measure, but not of the resolution, but voted for it with the intention of moving a reconsideration. I intended to move as a substitute for the resolution that all assistant physicians of regularly constituted institutions for the insane be considered members of the Association while in service. The question has occurred to me also whether the committee by giving five years as a period at the end of which assistant physicians could be received into membership, might not have some effect in preventing assistant physicians from coming as representatives of institutions who had not been five years in service. I have thought they might feel some delicacy about it. The intention of the report and the resolution was not, I suppose, to have any such influence on the rule of representation, which has hitherto been adopted, but rather to leave that practice undisturbed; it has been the custom for any institution to send an assistant when the superintendent could not attend, whether he had been in the asylum one or twenty years; and any assistant thus delegated would be as acceptable a representative and member during the time, as one who was five years in the service, or the superintendent himself. As all the committee are here, I would like to know whether such is the full understanding.

DR. EARLE. So far as I am concerned, Dr. Gray's interpretation is correct. Authority to send delegates still remains as before. It rests upon the constitution. Whether, under the circumstances, it would not be better to give expression to that fact, is a matter to be thought of. It may be that the authorities of the institutions will suppose that, inasmuch as the older assistants are members, the junior assistants will not be received as delegates. I am very glad the doctor mentioned the matter, and it strikes me that it would be better to announce it, in some way, in the report of the proceedings.

DR. GRAY. If you will permit me, I would suggest that the committee before any further action, ask to withdraw their report and amend or change their resolution to this proposed, and report back to the Association, if that is expedient.

DR. EVERTS. I do not see that anything is necessary. The practice of the Association will continue as before. The members of the Association will receive the delegates as heretofore.

DR. GRAY. Still without some action or recognition they will feel some delicacy in taking part in the discussion in view of the

fact that the Association had fixed as the length of service before membership—five years.

Dr. EVERTS. I do not think that any assistant physician will be a member until he presents himself under this new order of things. Any delegate to the Association would come under the same rules when notified by the secretary that such is the rule. I do not see the necessity of action in the premises.

Dr. STEEVES. Mr. President—As to the action of the committee in relation to this subject, I would say that there is one question in my mind, and that is whether this Association shall change its name or not. Whether we shall have it, not an association of superintendents of asylums, but of superintendents and assistants. I would like to ask the committee whether they contemplated any change or not. It seems to suggest such a question.

Dr. EARLE. I am very glad the gentleman has mentioned the subject. There was no conference between the members of the committee in regard to it. But, while drawing up the report, it struck me that, if this resolution was adopted, the name of the Association would no longer be correct. I generally endeavor to come to the point as soon as practicable, and consequently assert that, in my opinion, the name of the Association should be changed. I think it is the best policy to change it. I think that unless the change be made, another society will spring up, with a more appropriate name, and this will be obliged to retain its present title. I think this should be a "psychological society," or a "medico-psychological society"—that the title should be based upon the objects of the society, and not upon a name which simply signifies the official position of its members.

Dr. GRAY. Mr. President—I would offer a resolution that the name of the Association shall hereafter be the Association of Medical Superintendents and Assistant Physicians of American Institutions for the Insane.

Dr. CURWEN. Why not make it the American Psychological Association?

Dr. EARLE. I believe that the name of this Association should be the American Psychological Association.

Dr. GRAY. There is such an association now.

Dr. CHANNING. I think not.

Dr. GRAY. What is the name of the New England Association?

Dr. EARLE. There is the Neurological Association, or Society, and there is the New England Psychological Society, and this Association should be, for America, what the New England Society

is for New England. I think it would be a step in advance if this change should be made. Probably all of you know that the Association has been accused of being a close corporation. The name signifies as much. Under a different title that impression might be removed. The name itself is an unwieldy one. It is a long name. In order to use economy of words it is easier to speak of it as "the association with the long name." I remember the history of the origin of the name very well. It was compounded in the chamber at Jones' Hotel, and it took some time to make the compound satisfactory. It was written out, at first, in one shape, and I remember that Dr. Bell added one word which still remains in it. It was the word "American," suggested for the purpose of including the Canadian superintendents. I added the word "Medical," because Dr. Butler and I were not, technically, superintendents of the institutions with which we were connected. My title was "Resident Physician," but I was the principal medical officer. The institution was then under the administration of three officers, each independent of the other—the physician, the warden and the matron. The name was finally brought into a shape that was satisfactory so far as all these matters were concerned. It was truthful. I have nothing more to say, other than again to express my belief that it is the best policy of this Association to change its name. -

Dr. CHAPIN. If it is proposed to change the name of this Association, it is an important question for us to consider what its title shall be. It appears the composition of this body is about to be changed, but I am not in favor of a change of our name if by so doing we are to surrender any of the traditions or associations which attach to our present title. It may be an easy matter to adopt a name to the newly established composition of this Association. It may be called the American Association of Physicians, or Association of Physicians of American Institutions for the Insane.

Dr. GRAY. Wouldn't you say medical officers?

Dr. CHAPIN. I do not think it advisable to use two words where one may answer, as the physicians are medical officers. Neither do we desire to become exactly a psychological association, as there are many questions coming before us that are not psychological. We ought not to limit the range of subjects. I would be glad to have the subject referred again to the committee for a report.

Dr. CHANNING. It strikes me, Mr. President, that the sugges-

tion made by Dr. Curwen is a very good one; that is, to call this Association the American Medico-Psychological Association—if that was exactly Dr. Curwen's suggestion. This is, to be sure, copying the English precedent, but we could not follow a better one. I do not think, Mr. President, that we should be limited to the discussion of psychological matters by adopting that name. We want to adopt a name covering the proceedings of this Association in the future. The present name in the past has been the best; the question now is what will be the best one for the future. It strikes me that we could do no better than to follow the example of the British Association. If it is not done in this Association the chances are it will be done somewhere else. I feel certain, as one of the younger members of the Association, that this is one of the things that is bound to come; we have got to have an American Psychological Association. We have in New England a Psychological Society; there is also a Neurological Association, but we have no general society with the name psychological in it; I think the "medico" addition is quite an important word, for it more exactly defines the scope of the Association. I would therefore amend Dr. Gray's resolution by suggesting that the name of the society should be "The American Medico-Psychological Association."

Dr. BRYCE. Mr. President—The proposition to change the name of the Association, which has been so suddenly sprung upon us, should not be entertained without the most careful and deliberate consideration. Its present name has always seemed to me to be peculiarly appropriate, and I should regret to see it changed to one even as euphonious as that of "The American Medico-Psychological Association." We are, in fact, something more than a psychological association; and our present name indicates, perhaps better than any other we can adopt, the true character and work of our body. It is not to be denied that it constitutes us so to speak, a close corporation, but no exception can be taken to that in view of the special character of the work we have to do. I should have no objection to the formation of an American Medico-Psychological Association, as there could be no possible antagonism between it and our present organization, but the functions of such a body would be entirely different from ours, and could never be made to take its place. But, Mr. President, is there really any occasion for a change of name in order to admit assistant physicians as members of our body? The resolutions just passed did not meet with my approval in all respects, though I did not oppose

them when offered by the chairman of the committee; and if it is possible, to have them reconsidered, they can be so changed, I think, as to meet all the requirements of the case. A resolution that all assistant physicians of regularly constituted institutions for the insane shall be considered *ex-officio* members of this Association, without reference to their term of service, seems to me to be all that is necessary. Under such resolution, when their connection with the hospital ceases of course their membership of the Association also lapses.

But whatever course the matter under consideration may take, I hope that we shall be in no hurry to change our time-honored name, and that no action will be taken in that direction, at least, until the next annual meeting of the Association, when all the members will have had time to give the matter the important and deliberate consideration it deserves.

DR. CLARK. I think the suggestion of Dr. Bryce an important one. Let us not be in too much of a hurry. There is a great deal in a name. We had better extend the name of the Association only to what it covers. A psychological association covers more than a society of officers of asylums. It would include men who devote their time to abstract discussions of psychological subjects; men who ordinarily have no experience in executive work connected with hospitals or anything of that kind. I do not think we should extend our society to embrace those who are not connected with asylums. We should not extend the name to include merely psychological association. This would take in a number of wandering Arabs—(a voice: “Cranks”)—to discuss matters of which they are ignorant. (Hear, hear). We ought simply to have a definition that will cover asylum officers only. I would be glad to have you adhere to American or Americo-Canadian, but we Canadians call ourselves Americans as well as Canadians. (Hear; Hear.) We have the greatest country in area in North America. We have more territory than the whole of the United States; for our country goes to the North Pole. I agree with the gentleman entirely as to the expediency of not naming the society in a hurry, with a new designation.

DR. EARLE. It is a very serious matter. I have only expressed my opinion, and I do not pretend that my opinion is better than that of any other man. If it is best to take the subject into consideration at all, I would refer it to a committee to report a year hence; and if it is referred to a committee, I would refer to the same committee one or two other things. We profess to have a

constitution. It is a very brief one. It is sufficiently long, however, for our purpose, so far as I know, but part of it is in the shape of resolutions, and this, that you have just adopted, is not in the shape of a resolution. I think it would be better to put it into a little more organic form. Then, again, it is not definite in respect to the requisitions for membership. It declares that "the medical superintendents of the various incorporated or other legally constituted institutions for the insane," shall be eligible; shall be members. But what is a legally constituted institution?

When the society was organized, it was thought that no institution that was not incorporated by an act of the legislature was legally constituted—that the proprietor or director of no private institution had a right to membership. Until within a few years the private institutions in Massachusetts could in no way be considered as legally constituted. In one sense they now are, because no one can open a private institution without a license through a legal channel.

Dr. GRAY. I would like to say one word here on this question. I voted for the resolution with the intention of moving its reconsideration. I should have done so at the time, but the pressure of the immediate business of the Association induced me to delay it.

My intention was to move that assistant physicians, without respect to period of service, while connected with institutions and when attending meetings, be considered members, and have a voice and vote in the deliberations. I think that is the wisest thing now. I should not be afraid of a word. I do not think there is anything so attractive in "psychological" as to induce us to drop out the word "American" in favor of it. As Dr. Chapin suggested, this Association has a history. No one can claim that it is a weak association in any respect. It has been one of steadily increasing strength and vigor in every direction, whether relating to membership, character, progress in management, quality of papers or their discussion or its organization. I should certainly insist on retaining our distinctive title as the Association of Medical Superintendents of American Institutions for the Insane, though a hundred other societies were to appropriate the word "psychological."

Touching a question which Dr. Earle has raised, I have always been under the impression that Drs. Cutter and White were men connected with private institutions. Whether Dr. Cutter's asylum was a "legally constituted" institution or not I do not know. Dr. White's I know was simply a private establishment, opened

without license. Dr. White was the first vice-president elected in the Association. My understanding has always been that superintendents or medical heads of institutions, of whatever character, public or private, devoted to the care of the insane, were included as members. This has certainly been the practice. There was a discussion in the Association at Baltimore a number of years ago, arising out of a letter written by the late Dr. Wilbur, of Syracuse, requesting the admission of superintendents of idiot schools. The rejection of the proposition created some bitterness on his part at the time and afterwards, which he never overcame. I remember Dr. Ray very distinctly then maintaining the position that this Association was for the promotion of all interests relating to the insane, and that to gather in other institutions would be, after a while, to multiply membership and multiply institutions represented to such a degree that the Association would become unwieldy and break down of itself.

I sincerely hope that whatever we do, we shall maintain our distinctive title, and without postponement determine the question here and now. We shall not be any wiser a year hence than we are now. I trust that any action taken towards admitting assistant physicians to membership in the Association will not involve a change of the title or name of the Association. The introduction of the words "and assistant physicians," after "superintendents," would not alter the title of the Association.

Dr. GILMAN. I am in entire sympathy with the remarks that have been made with regard to retaining our distinctive name as an association, and I do not think that it is necessary that any radical change be made by the resolution which we have adopted this morning. It seems to me that the work which we have in hand as superintendents of these institutions throughout the country, is a specific one, and to change the name to a psychological association or a medico-psychological association, would be a misnomer. The Association has been attacked by so-called reformers who would gladly see its name extinguished, and I am not in favor of yielding to cranks, either long-haired or short-haired. I trust that some such proposition as has been presented by Dr. Gray will be adopted and will be sufficient to cover the ground.

Dr. NICHOLS. Mr. President—I desire to express my sympathy with the views that have fallen from Dr. Chapin, Dr. Bryce, Dr. Clark, Dr. Gray and others, and to express the strong desire I feel that no material change shall be made in the name of this Association. In the first place, I think there is much in the point

made by Dr. Chapin respecting the importance of holding to the traditions of the Association, and as Dr. Clark remarked, "there is a great deal in a name." It is my settled conviction that the usefulness of this Association has depended largely upon the sphere of activity that is described by its name. It was organized originally, as I understand, to promote the treatment of the insane with reference to the amelioration of their condition, in institutions of whatever kind. A great many questions that have been discussed—that have occupied whole sessions of this Association—and very properly—have not been psychological questions. They have been proper questions for the Association to discuss under its name and under the purposes of its organization; questions in relation to construction; to the details of fitting up and furnishing, which in its early years properly occupied more time than they do now; questions that occupied whole sessions of this Association and parts of many sessions. It seems to me that the charge that we are a close corporation is not of the slightest importance. It was organized for a special purpose, and has kept to it, and I think we had better continue to do so. In keeping to its purpose has lain its strength and usefulness. I think, if it is necessary to change the name of the Association so as to make it consistent with the admission of assistant physicians, it might be done. But I do not see that any great change is required. It does not require any change that will admit people or subjects that are foreign to the purposes of this Association, or that will exclude any subjects that come within the purposes of this Association. Traditions are to my mind, especially when connected with an association that has continued for forty years, and done the work and had the membership this Association has had, are sacred, and I am strongly opposed to abandoning them. I would not alter the name at all, but I see no great objection to calling this an Association of Medical Officers of American Institutions for the Insane. I hope no other alteration will be made.

Dr. GOLDSMITH. To take up a matter that has been passed over, concerning which Dr. Gray spoke, it seems to be the opinion of many members, as it was mine, that it is rather unfortunate to make the duration of service the criterion for admission to the Association. Of course the duration of service is no criterion of ability, and a person who has been less than five years in service, and has a desire to attend the meetings of the Association, ought certainly to have, it seems to me, the same privilege as he who has

been in the service five years and has no desire to attend. I therefore, if it is in order, to test the feeling of the Association, move, that the action of the Association in accepting the report of the committee appointed to consider the question of the admission of assistant medical officers of asylums be reconsidered. I do this with the supposition that, in case it shall be reconsidered a motion will be offered similar to that which Dr. Gray suggested, constituting all assistant medical officers as members. Of course it will be recognized immediately that this will not so enlarge the Association practically as to make it unwieldy, because not more than one medical officer aside from the superintendent can leave a hospital at the same time with the superintendent.

Dr. CHAPIN. I will offer an amendment to the resolution of Dr. Gray, that the title of this Association be amended so as to include superintendents and all physicians—that it be an *Association of Superintendents and Physicians of American Institutions for the Insane*.

Dr. GRAY. I accept that amendment.

Dr. NICHOLS. You would continue the word “medical” before “superintendents,” because otherwise that would embrace lay officers.

Dr. GRAY. Certainly; I would not change one word in the title, but simply add “and physicians,” or better “assistant physicians” after superintendents.

Dr. BRYCE. I believe the discussion is upon the resolution of Dr. Gray amended by Dr. Chapin, to change the name of the Association. I think, Mr. President, we can arrange the matter entirely satisfactorily without that, by reconsidering the resolution offered by the committee and adopting another which I shall offer at the proper time, to the effect that all assistant physicians of regularly constituted hospitals for the insane, be considered *ex-officio* members of the Association. It seems to me that such a resolution will cover the whole ground and the question of changing the name will not come up. If this substitute is accepted in lieu of the one adopted there will be no necessity for a change in the title. I prefer that our name should remain what it has been for so many years, because it means just what we are—an association of medical superintendents. I hope, therefore, that the title will not be disturbed, and that a reconsideration of the report be had.

Dr. EARLE. There is no objection to that if you would limit it as this resolution is limited—as long as they continue in connection with asylums.

Dr. BRYCE. I think the word "*ex-officio*" would meet that objection.

Dr. EARLE. Very well. Would it not be a shorter way for the committee to adopt that amendment in their resolution?

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Dr. EARLE. Very well. Would it not be a shorter way for the committee to adopt that amendment in their resolution?

Dr. BRYCE. If it be in form.

Dr. BANCROFT. I would like to get an expression of the members why it is not the shortest, briefest and all sufficient to say nothing more than "medical officers" as has already been suggested by Dr. Gray? An Association of Medical Officers of American Institutions for the Insane. It will cover the assistants and the superintendent. It will cover everything that is wanted, and will contain everything that the Association wants. Simply "medical officers;" and that will avoid the necessity of introducing any new phrase at all. I do not see why that is not all sufficient for everything that has been thus far suggested.

The PRESIDENT. The matter now before the Association is on Dr. Gray's motion to change the title of this Association as follows: "The Association shall be known as the Association of Medical Superintendents and Physicians of American Institutions for the Insane."

Dr. SCHULTZ. I was not present at the beginning of this discussion, but from what I have heard of it, I suppose it has started on the theory that the title of an association or society must be a description of the character of its membership, not only in a general way, but somewhat accurately. This, no doubt, is desirable, but to my mind it is not at all essential. I believe that the far more usual method is to state, who shall be members of a society, somewhere in the By-Laws or Constitution. And when the question arises whether an old and well known name shall be changed in order to express a change in the membership or its character, then my sympathies are entirely with the tenor of Dr. Bryce's remarks, who advises that the old name be adhered to, and this I would do the more unhesitatingly, because it has been held up to reproach by unfriendly critics. To my mind it is much more desirable that the object proposed to be accomplished, be secured by adding a clause to the Constitution or By-Laws, if there are any.

On motion of Dr. Andrews the report of the committee as read by Dr. Earle was again read.

Dr. PRATT. As one of the honorary members I should be glad to say a word. I would ask a question which perhaps contains a suggestion. Does not your organization—although your constitution does not clearly and distinctly express it—imply that your true voting unit is the insane asylum? If that be the fundamental idea—that asylums are represented here—it seems to me that you do not need to change your name very much—if you can provide in your constitution whom of the medical officers of those asylums you will admit as your members.

Dr. CLARK. I was going to suggest that it would be well to put in “and other medical officers” because when the medical officer becomes superintendent he is not annihilated as medical officer.

Dr. GRAY. It is “medical superintendents and physicians.”

Dr. CLARK. Oh, I thought it was worded differently.

Dr. FRANKLIN. I would throw out one suggestion. There is one point in reference to some institutions which should be thought of in the use of this word “physicians.” Is it contemplated to take into this Association all consulting boards, all visiting boards that may be connected with any city or other institution? Does the resolution comprise that? I would ask that as a matter of information in the first place; medical superintendents and physicians or medical officers? Now, in the city of New York, Mr. President, the inclination is to have visiting boards at our institutions. If we have visiting boards, as we probably may have in a little while, we will have men of all complexions, and we may have some men who have maligned this Association, and who ought not to be in it.

The PRESIDENT. The question before the Association is on the adoption of Dr. Gray’s resolution to change the name of the Association so that it shall read “The Association of Medical Superintendents and Physicians of American Institutions for the Insane.”

The resolution was declared lost.

Dr. Andrews moved the reconsideration of the report of the committee on the admission of assistant physicians which was decided to be in the affirmative.

Dr. BLAND. Mr. President—I move that the resolution be referred to the committee and let them report on Friday again as to any alteration.

Dr. RICHARDSON. Several of us will probably not be here Friday, and it seems to me that action should be taken before that time. I should like to have it reported upon before then. It is something we all have an interest in.

Dr. Bland's motion was amended instructing the committee to report this evening.

Dr. EVERTS. The motion now before the Association is to refer that resolution that has been reconsidered, to the committee that originally reported it and that they report this evening.

Dr. GOLDSMITH. Mr. President—It seems to me that as we have discussed the matter fully at this session, we will have no better time to act upon it than the present. If the opinion is that all assistant physicians should be *ex-officio* members, it would be a very simple matter for the committee to make such report now to the Association. I think that the committee will probably be willing to do so, and in that case it would be better to have it done now than later.

Dr. EARLE. I think it can all be done very quickly if the Association will be satisfied to have it so. There is no doubt that this committee will adopt anything that is satisfactory to the Association in regard to the term of service. Five years was fixed upon because, in so far as individual members who are not upon the committee were consulted, they favored it. I am perfectly satisfied that every assistant physician, so long as he is connected with an institution, shall be a member of the Association.

Dr. Bryce offered this resolution as a substitute: That all assistant physicians connected with all regularly constituted institutions for the insane be constituted *ex-officio* members of this Association.

Dr. MILLER. I would like to ask, Mr. President, if we are not already well provided in our by-laws, constitution and annual proceedings as to representatives of the different institutions? This will give to some of the asylums five or six members, to other asylums two or less. This is not a political organization. If I understand it correctly it is an Association of representatives

from the different asylums, and upon all matters requiring a vote, I think one vote is sufficient. I think in your proceedings one representative from each asylum would be justice to all.

The President then put the motion on the resolution of Dr. Bryce to a vote and it was declared carried.

The Secretary then read the report of the committee to audit the accounts of the treasurer. They reported receipts during the past year, \$206.25; disbursements, \$156.41; leaving a balance of \$49.84. They recommended an assessment of five dollars be levied on each member to meet the current expenses.

Dr. ANDREWS. Mr. President—In regard to the report and the recommendation of the committee I would like to inquire whether the assessment of five dollars, is to be expended for the purposes of the Association, and in what way it is to be expended.

Dr. NICHOLS. I would like to make a suggestion in relation to a matter that has been on my mind for several years, Mr. President—It may be considered in conjunction with the inquiry made by Dr. Andrews. The members present have been assessed for several years, as the committee recommend that we be assessed this year, five dollars apiece, and some of us not only have to pay our own expenses to and from the meetings, and our board bills during the meetings, but a large share of the annual expenses of the Association as well. Now, five dollars is not a very large sum and I am perfectly willing to continue to pay it, if it is considered a fair way to do, but it really has never seemed to me to be quite fair. It has long seemed to me that the whole membership should be assessed, at least for the expenses necessary to carry on the work of the Association, of which all the members reap the benefit. With the increase in membership it is probable that the payment of one dollar by each member will raise all the funds we need and not be much felt by anybody. I have sometimes thought that an assessment of five dollars might be felt to some extent by some members of the Association, but that their pride, perhaps, prevented their saying so. It is customary in other bodies to assess the whole membership in raising money for expenses of the body, and I do not see why it should not be done here.

Dr. RICHARDSON. I would like to ask the Secretary, Mr.

President, if in making this assessment it is customary to make the assessment on all members; whether he lets it remain as a voluntary matter, letting those who are here pay and not assessing others? I have thought this was the case in former years. As Dr. Nichols says, it is hardly fair for the members present to have to pay this assessment and have no notice sent to those who did not happen to be present.

Dr. GILMAN. If it is in order, I would make the motion that an assessment of one dollar be made upon each member of this Association hereafter, to pay the expenses of the organization. I think that sum, with the increased membership we have now, would be sufficient, as suggested by Dr. Nichols.

Dr. BANCROFT. It seems to me that that would not be enough. It would be only the number of dollars that there are institutions.

Dr. NICHOLS. Some institutions would pay twelve dollars or more.

Dr. BANCROFT. That suggests another idea to me. The question occurs to my mind whether it would be felt to be satisfactory to assess those institutions at that rate, according to the number of their assistants? Might it not be considered oppressive in some cases?

Dr. GOLDSMITH. It seems to me that that is hardly fair. We have voted in a large number of new members, a great part of whom will never be able to attend the meetings of the Association, and practically never receive any benefit, and I do not see the justice of making an assessment on such members unless it is voluntary. If we established an annual fee for membership to the Association and then had the membership voluntary with each individual, I think it would be a perfectly proper arrangement. Now take for instance the city asylums in New York. There are a lot of assistants there without any salary, and it is not an easy matter to assess them for the expenses of an association they will never attend and from which they will derive no benefit.

Dr. HILL. It seems to me very unjust to assess these assistants at all. The superintendents have the privilege of coming or not as they may choose, or sending an assistant or keeping him at home. Then, too, the assistants have much smaller salaries than the superintendents. I should think the expenses of this Association, so long as it is called an Association of Superintendents—the expenses of it should be paid by the superintendents and none of it paid by the assistants. It seems to me that if this motion of Dr. Gilman is changed to make the assessment two dollars for

each superintendent, it would meet the requirements and give satisfaction. I am sure that the assistants would laugh at the idea of being voted in and being assessed contrary to their wishes.

Dr. GILMAN. I would accept Dr. Hill's amendment, making the assessment two dollars. I merely made this motion to bring it before the Association. I think that perhaps two dollars would be more nearly correct, and I would make it two instead of one, confining it to the superintendents.

Dr. DRAPER. Before any action is taken I should like to have Dr. Andrews' inquiry answered.

Dr. CLARK. I see in examining the reports of the Treasurer for a number of years, that a large item is paid to the stenographer for reporting the proceedings of this Association, and also in transcribing corrections, &c., that are made by members afterwards; some \$114 are applied to that purpose; then fifty or sixty dollars for printing, stationery and other necessary expenses, as well as postage. It takes an average of two hundred dollars a year to pay the expenses of the Association. It seems to me that is fair pay for legitimate work. I understand that occasionally some of the members who come to the meetings forget to pay this assessment of five dollars apiece. At least they do not pay it. If every member who came would pay, it would cover the whole ground; but we have got to pay for those who do not. The question arises: can you do it in any other way? Perhaps if you made the assessment two dollars for all members the addition of the fees of other members might make up the whole sum. Let it be a yearly assessment on all members.

Dr. BLAND. I would like to have a statement from the Secretary, Dr. Curwen.

Dr. CURWEN. It will be recollected that many years ago the Association directed the Secretary to employ a phonographer to report the proceedings of the Association. That has been done, and that is part of the expense. Then the Association last year, you will recollect, passed a resolution to have the history of the Association printed. This is a part of the expense which is not yet paid. That is where the money will go, to pay those two expenses. Then comes the postage, printing and circulars—all those little things take money. The printing of the circulars, the postage, which is sometimes considerable; it costs sometimes ten dollars to send out all these things.

Dr. ANDREWS. As to the items in regard to the expenditure—the Secretary has only given the whole in round numbers. I notice

when we have an official stenographer, we have great delay in printing the proceedings, and I do not know that we had last year any official proceedings furnished. The proceedings were given entirely by the JOURNAL OF INSANITY, and were printed by that journal. I see this year we have two reporters, and we will have two sets of reports, one of which will cost three hundred dollars, more or less, and the other will be furnished by the JOURNAL OF INSANITY without any expense to the Association. One reason why I wanted to reach this matter, was to know whether we could not get along as well with one stenographer as with two, and if we get one report that would be free of cost, why would it not be as well as to pay out this sum of money. The reports have hitherto been late every year, and it has been difficult to get them printed without great loss of time.

Dr. CURWEN. The reason of that is that last year the stenographer was sick and confined to bed for several weeks. Then there is another reason. It seems almost impossible to obtain remarks from the members after they have been sent them for revision. Sometimes we have to write two, three or four letters before we can get the revision.

Dr. ANDREWS. I would say in reply to that, that the remarks are so imperfectly reported, and they need so much revision that members really do not know what they have said. The stenographer's report has been very imperfect each year. The report last year was very accurate, was furnished without any delay whatever, and it was furnished without expense to the Association.

Dr. EVERTS. Dr. Gilman's motion is before the house.

Dr. NICHOLS. On the whole I think it better that the superintendents should meet the expenses of the Association, and ask leave to amend that motion so that it shall read: That the Medical Superintendents of American Institutions for the Insane be assessed three dollars each.

Dr. GILMAN. I accept that.

Dr. DRAPER. I would suggest the addition that the Secretary furnish to the members a copy of the proceedings each year.

Dr. GILMAN. I accept that suggestion.

Dr. EVERTS. The motion as it now stands is that the Medical Superintendents be assessed three dollars for next year, and that the Secretary be required to furnish to the members a copy of the proceedings.

Carried.

Dr. KILBOURNE. It seems to me that we are getting into an interminable muddle. In my judgment, as a matter of business, this Association should appoint a suitable committee to consider well and digest every one of these propositions, and report intelligently to this Association. One suggests a one dollar assessment, another two and another three, and not a single line in the by-laws which says who shall be assessed and who shall not. Here we are going to take in a large body of assistants, and yet there is nothing defining their relations to this Association; whether they are to be assessed or not. It seems to me that the whole matter should be relegated to a committee, and that that committee——

Dr. NICHOLS. The Secretary says if all the members would pay up there would be no difficulty.

Dr. GILMAN. I think it ought to be confined to the superintendents.

Dr. KILBOURNE. I do not think the Association can be carried on by an assessment of three dollars. As to the assessment of absent members I have been in this Association fifteen years, and I have never received an invitation to pay five dollars when I was not there. Only when I was present did I pay five dollars. I don't think it is right; I think every member should pay. It seems to me that the by-laws and constitution need altering, and that a committee should be appointed who would carefully and deliberately report this matter to the Association in an intelligent manner.

The President then put the motion of Dr. Gilman, that superintendents be assessed three dollars each, and that a copy of the proceedings be furnished each member, and it was declared lost.

Dr. KILBOURNE. I move that a committee of three be appointed by the chair to which the questions of assessment of members be referred, which committee shall report this evening.

Carried; and the chair appointed Drs. Kilbourne, Nichols and Clark.

Dr. Kilbourne requested that his name be withdrawn, but the President declined to do so except by the action of the Association. Dr. Kilbourne then asked that

when we have an official stenographer, we have great delay in printing the proceedings, and I do not know that we had last year any official proceedings furnished. The proceedings were given entirely by the JOURNAL OF INSANITY, and were printed by that journal. I see this year we have two reporters, and we will have two sets of reports, one of which will cost three hundred dollars, more or less, and the other will be furnished by the JOURNAL OF INSANITY without any expense to the Association. One reason why I wanted to reach this matter, was to know whether we could not get along as well with one stenographer as with two, and if we get one report that would be free of cost, why would it not be as well as to pay out this sum of money. The reports have hitherto been late every year, and it has been difficult to get them printed without great loss of time.

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Carried; and the chair appointed Drs. Kilbourne, Nichols and Clark.

Dr. Kilbourne requested that his name be withdrawn, but the President declined to do so except by the action of the Association. Dr. Kilbourne then asked that

Dr. Nichols be named as chairman of the committee, being an old member of the Association, and as a matter of courtesy.

The PRESIDENT. He is on the committee, and I will guarantee that he will furnish all the wisdom that he possesses.

On motion of Dr. Gray, adjourned until 4 P. M.

The Association was called to order at 4 P. M. by the Vice-President, Dr. Buttolph.

The Secretary read a letter from Dr. John C. Hall, Superintendent of the Friends' Asylum, Frankford, Penn., expressing his regret at not being able to attend, and also his regards to the members present.

Dr. CURWEN. I would like to make a statement in reference to a matter which took place this morning. At a meeting held in Philadelphia, in 1867, the Association passed a resolution in regard to reporting the proceedings of the sessions. These resolutions were prepared by a committee of the Association, upon which was Dr. Earle, and were to the effect that the Secretary should employ a phonographer to make regular reports of the Association; that these reports, when so made, should be copied and the remarks of each member sent him for correction; that when corrected, the Secretary should put them in shape, and publish them over his signature as the official proceedings of the Association. Several reporters were employed by the Secretary, who did not give satisfactory reports. Finally I employed Col. Deming, of Harrisburg, to make the reports. Those reports have been in the main as correct as any one under the circumstances could make them. Gentlemen who have attended meetings of the Association will remember that in many of the rooms in which the sessions were held, it was simply impossible to hear what was going on; the discussions were interrupted by the noise on the streets. Certain gentlemen were not satisfied with the reports, because they were not permitted to add to the remarks after they had been sent to them, it being the rule that no additional matter was to be added; any gentleman might abridge his remarks, but it was not permitted, under the rules of the Association at that time, to add any original matter, and there were

gentlemen who often wished to add matter which could not be allowed. The report has heretofore been presented and prepared in that way. Last year a report was prepared by the phonographer employed by Dr. Gray, as stated this morning, and sent to the different members. That report was not as correct, in many particulars, so far as it came under my notice, as the report prepared by the regular phonographer. I saw a great part of it; not the whole of it. I say this simply in justice to Col. Deming himself, and after what was said this morning.

The chair announced as the next business of the session the reading of a paper by Dr. Strong.

Dr. STRONG. The subject of my paper is "Education as a Factor in the Prevention and Cure of Insanity." I shall discuss or study it in the light of cerebro-spinal physiology. [See paper in this number of JOURNAL.]

The chair announced as the next order of business the reading of the report of the Committee on the Bibliography of Insanity, by Dr. Channing.

Dr. Channing's paper will appear in the October number of this JOURNAL.

The report of the Committee on Time and Place of Next Meeting was read. It recommended the first Tuesday in June, 1886, as the time, and Lexington, Kentucky, as the place for the next meeting.

Dr. GRAY. Wouldn't it be rather warm there at that time of year?

Dr. DRAPER. I would say that Dr. Mitchell, of the committee, was of the opinion that it would not be uncomfortable at that time.

Dr. STRONG. Mr. President—I know we nearly roasted in Philadelphia once at an earlier period than that; and Lexington is south of Philadelphia.

Dr. BLAND. I move that the report of the committee be accepted.

Carried.

The PRESIDENT. The special committee, of which Dr. Kilbourne is chairman, is ready to report.

Dr. KILBOURNE. The Committee on Assessment would respectfully recommend that all Medical Superintendents of American Institutions for the Insane be assessed three dollars each, to meet the current expenses of the Association during the current year.

On motion of Dr. Andrews the report was adopted.

Dr. KILBOURNE. I would add, Mr. President, that it was the sense of that committee that all the medical superintendents should pay this assessment, whether present or absent.

On motion of Dr. Curwen, adjourned until 8 o'clock P. M.

The Association was called to order at 9 P. M. by the President, Dr. Everts.

The President announced as the first business of the session the reading of an obituary notice of Dr. Edward Jarvis by Dr. Theodore W. Fisher.

Dr. Gray then read a paper on "Some of the Preventable Causes of Insanity." [See this number of JOURNAL.]

At the close of Dr. Gray's paper, Dr. Goldsmith read a paper on "The Relation of Syphilis to Insanity."

Dr. GRAY. Gentlemen—I crave your indulgence for a moment to make a few remarks in reference to that part of my paper treating of maternity. The Women's Christian Association of Utica has undertaken the matter of organizing a Maternity Branch of the Association with a view to supplying help to all poor and indigent persons who might apply through a physician. They created this as a special branch, calling it "The Maternity Branch of the Women's Christian Association," and stated that their experience fully justified my suggestion of a special branch and the employment of persons in the house of the mother to do the general labor and ordinary household duties; a person of the same social class. In this way the responsibility, and especially the worry and care of the household, would be taken off the sick woman, and she would recover far more favorably, having this relief and her health as well as the better nourishment and care of the child would be better secured. Trained nurses in such

cases would not be advisable or needed; the patient would be under the direction of the physician, and the aid proposed is all that would be necessary, with such visitation as members of this association would give. In a large proportion of such cases the professional work would be voluntary and unremunerative. Such rules could be printed and promulgated for the use and guidance of those undertaking the work, that there would be no difficulty in carrying out the object of the association: the care of this class of poor mothers.

Dr. DRAPER. Mr. President—The Committee on Time and Place desire to withdraw and amend their report and fix the date of the next annual meeting, the 18th of May, 1886; the third Tuesday of May instead of the first Tuesday in June.

Agreed.

Dr. GOLDSMITH. Mr. President—I want to take time for one moment, as I am not sure that I shall have another opportunity to speak to the Association, to make a communication. Some members of the Association may remember that two years ago, at Newport, I read a paper on what I called “A Case of Moral Insanity,” or what might perhaps more properly be called “Hysterical Insanity.” The case was one of a girl, who from nine to nineteen years of age had been continuously in hospitals for the insane, and had been considered the most troublesome patient in each of the hospitals where she had been. She had on several occasions been tried at home, but without success. I stated that her attacks frequently occurred at the periods of menstruation, and that she usually had some disturbance then. There was some tenderness about the ovaries, and I asked the opinion of the society about the advisability of double ovariectomy, although there was not a great deal of encouragement then given, and I did not have any great hope of the success of the operation, as she was such an excessively uncomfortable individual. Dr. John Homans, of Boston, kindly performed the operation July, 1883, and pronounced the ovaries perfectly normal, after having examined them microscopically. About one month after the operation she appeared well and was taken to her own home, where she has since lived in precisely the same way as the other members of the family without disclosing the slightest evidence of mental unsoundness. She has never shown the least loss of self-control, or unusual excitement, and says that she seems to herself “entirely another person,” because she before felt herself

continually in danger from slight irritations, which do not now disturb her in the least. Her mother and another friend confirm this statement, and say that she is not at all "nervous or peculiar," but helpful, dutiful and judicious in the family and in her social and church duties. I could observe no loss of femininity in voice, appearance or manner, and her friends tell me that there has been none. She has not menstruated since the operation. I have waited two years before reporting the result in this case, but think that now sufficient time has elapsed to prove the value of the operation in spite of her long continued insanity. During this developing period of life she showed no evidence of dementia. I believe the experiment justifiable.

On motion of Dr. Curwen the Association adjourned to Thursday evening at 8 o'clock.

On Thursday the Association with their friends took an excursion to Fort Ticonderoga and Lake George, returning at 6 P. M.

The Association was called to order Thursday, at 8 o'clock P. M., by the President, Dr. Everts.

DR. CURWEN. I understand that some members of the Association propose to visit Europe this spring. I therefore move that any member of the Association visiting Europe during this summer be given credentials from the Association to the British Medico-Psychological Association of Great Britain.

Carried.

Dr. Everts, the President, then announced as Committee of Arrangements for next year, Drs. Chenault and Rodman, of Kentucky, Dr. Callender, of Tennessee, Dr. Richardson, of Pennsylvania and Dr. Curwen, Secretary.

Dr. Clark suggested the consideration of a uniform system of tabulating post-mortems; that a committee be appointed to devise such a scheme; that it should

embrace the important points in the clinical history of patients as well; that with such a printed schedule the medical officers of all the asylums to make a record which at length would be most valuable and the scheme might include a form for microscopic work. He also stated that there were about three thousand deaths as the rate for the whole of the asylums in connection with the Association, in which there would be several hundred post-mortems yearly. This would utilize to the best advantage, the post-mortems, held in the different asylums in North America; and would bring before the Association, in a practical way, results by classification that possibly could be got in no other way. Such work would be the means also of stimulating superintendents and assistants in many cases to make post-mortems, and to keep records of the symptoms before death. He desired to throw this out as a suggestion that might possibly be of some importance.

Dr. HILL. Mr. President—I am heartily in favor of such a step, and hope that a committee will be appointed as suggested, and that the committee will get out blanks stating what data they would recommend to have tabulated in post-mortems, so that no point of importance may be omitted in making post-mortems or in putting down the symptoms on paper; so that there may be some uniformity in the records of the various institutions when they are brought together for comparison.

Dr. CURWEN. I move the appointment of a committee of three for drawing up a paper of the kind Dr. Clark has suggested, and decline myself to be a member of such committee.

The motion was carried, and the President announced as such committee Drs. Clark, Andrews and Schultz.

The President announced as the next order of business the reading of the report of the Committee on the Treatment of Insanity.

Dr. SHEW. Mr. President and Gentlemen—About three weeks ago I received a letter from Dr. Carriel, chairman of this committee, stating that he could not be present and that he had prepared no report for the Association. A few days ago, Dr. Burrell, of Canandaigua, wrote me to the same effect. Dr. Carriel requested that I should furnish something. It was too late to prepare a regular report of the committee, but I had just previous to that time been reading the annual reports of various institutions for 1884, and had taken some notes in regard to points of interest to all of us from most of the reports, and it occurred to me that that might possibly cover the ground contemplated in the appointment of such a committee, if I should from these sources endeavor to show what has been done by the American superintendents during the past year.

Dr. Shew then read the paper which will appear in a future number of this JOURNAL.

Dr. Cowles read a paper on the Insanity of Fixed Ideas, which will also appear in a future number of this JOURNAL.

The Association adjourned until Friday morning at 9 o'clock.

The Association was called to order at 9.30 A. M. Friday, June 19th, by the President, Dr. Everts.

Dr. NICHOLS. It occurs to me, Mr. President, to inquire if it would not be well to insert in Dr. Curwen's resolution that was passed last evening in regard to members going abroad, "and other psychological associations;" for example, some member in the course of the year might want to attend the meeting of some continental association, and it seems to me that it would be equally proper for the Secretary to give him a letter to such association.

The PRESIDENT. There could be no objection to that certainly.

The Secretary then read a letter from Dr. Richard S. Dewey, of Kankakee, Ill., expressing his regret at not being able to attend this meeting of the Association, and giving some particulars of the late fire in that hospital.

Dr. Hill next read a short paper on a case of Artificial Respiration Long Continued.

Dr. Chapin, of the Committee on Resolutions, presented the following report:

This Association, being now about to close its thirty-ninth session, congratulates itself upon the continued zeal of its members, and their loyalty to its original purposes, which have co-operated to bring together more than sixty superintendents and officers of the American Institutions for the Insane from the extreme confines of the United States and the provinces of Canada, having in charge the interests of more than 22,000 insane persons, believed to be the largest assembly of members in the history of this body. It congratulates itself upon the fellowship and harmony which have characterized this and all preceding meetings. It deems it also a fitting occasion to place on record its appreciation of the increasing usefulness of an organization which is a medium for the presentation of papers and experience in the treatment of the insane, the discussion of all the various questions relative to the construction and best methods of internal administration of asylums for the insane; consultations about the perplexing questions constantly arising in the discharge of our difficult duties, as well as a more general diffusion of knowledge respecting the vexed social problems about which we are engaged.

With no disposition to exercise what might be considered a censorship of the proceedings of the Association, the committee can not, in view of the largest interests of this organization and the probable addition to our membership, refrain from respectfully offering a suggestion that in the presentation of voluntary papers some reasonable limit, as thirty minutes, should be held to exist; also that the President and Committee of Arrangements might profitably set apart some portion of each session for the consideration of miscellaneous business which may come before this body, as well as to announce before the annual meeting a probable programme of the ensuing meeting.

The following resolutions are submitted for your consideration: first—

Resolved, That the thanks of this Association are tendered to our late president, Dr. Pliny Earle, for the satisfactory manner in which he has presided, and for the valuable annual address which he delivered before us; and secondly—

Resolved, That the resolution adopted at the meeting held in

Cincinnati in 1882, relative to standing committees, be hereby rescinded, and all members of the Association be invited to prepare voluntary papers, and furnish the Secretary with the title of the paper they propose to present one month prior to the annual meeting; and thirdly—

Resolved, That the thanks of the members of the Association are due to Messrs. Tompkins, Gage & Co., managers of the United States Hotel, for their personal attention to our comfort and the use of the parlors of the hotel for the purposes of the meeting, and to the officers of the Delaware and Hudson Railroad Company for an excursion to Lake George at a reduced rate.

JOHN B. CHAPIN,
A. M. SHEW.

Dr. CHAPIN. Dr. Fauntleroy was not present at the meeting of the committee, and his name is not attached.

The report was adopted.

Dr. Buttloph in the chair, Dr. Everts read a paper on "New Wine in Old Bottles."

Dr. CHENAULT. Mr. President—I was not present last night when the resolution of Dr. Clark, of Toronto, was offered in regard to the appointment of a committee on the subject of post-mortems. I did not vote on that proposition myself, and after considering the question I feel, sir, that it is my duty to offer a motion that the Association reconsider that action.

On request Dr. Chenault gave way to Dr. Buttolph, who said:

Notwithstanding the rather extreme length of the paper I read, a part of the matter naturally connected with it was contained in another paper, with some biographical descriptions of Galt and Spurzheim, and some statement of the believers and advocates of their system at that period. That period is as far back as the recollection of most of the members of this Association is concerned. Indeed, the matter is connected with a century back of the present, and there are so few persons who have access to the correct knowledge in regard to that period, who know of their labors, their professional eminence in all respects, that I deem it quite important that some definite information in regard to these men and to that period should go out in connection with the statements that I have already made on the subject. In view of the

late period of the session and the diminished number of members present, if that paper could be recognized in connection with what I have said I should be satisfied. I think there has never been a sufficient degree of appreciation of the labor, the science, the persistent industry of twenty or thirty years on that subject by men of that period, and it is impossible to estimate the importance of the subject without knowing more of that part of the history.

Dr. NICHOLS. Mr. President—I move that the portion of Dr. Buttolph's paper which he has not read—the supplement to his paper—be considered by this Association as a part of the paper, and that he be authorized to publish it as a paper read before this Association, or presented to this Association; perhaps that would be more literally true: as a paper presented to this Association at this meeting.

Dr. Nichols' motion was carried.

Dr. CHENAULT. I now move that the motion adopted last evening to appoint a committee on post-mortems be reconsidered and laid on the table.

The PRESIDENT. Did you vote for it?

Dr. CHENAULT. I did not.

The PRESIDENT. Then you can't move to reconsider it.

Dr. CLARK. I think Dr. Chenault is under a misconception about this matter. It was not intended that we should act as a committee to gather statistics of post-mortems, but simply to devise a scheme for making them uniform, and get out suitable blank forms to present before the Association next year.

Dr. HILL. Being one of the younger superintendents, I am embarrassed as to what tables to use in my printed report. I am about to make one, and would be glad to have them uniform with reports made by other superintendents—but I don't know which set of tables or whose tables are most approved by this Association, and I should be glad to receive information on this point, or have some one tell me of any action that has been taken by the Association in times past on the subject, as I think uniformity of tables is very desirable.

Dr. EARLE. About thirteen or fourteen years ago Dr. Jarvis was a committee upon this subject, and he reported a series of tables, and they were adopted by the Association at the session in Toronto. But different members of the Association have gradually departed from that rule, and have left it and added tables to suit themselves. I think if the gentleman would take the Pennsylvania

Hospital Reports or the reports of the Utica Hospital, he would come nearer following the rule of the Association then adopted.

Dr. GRAY. I think one of the difficulties in the way of uniform statistics referred to by Dr. Hill, arises from the fact that the legislature in some instances in enacting laws organizing the institutions, direct what statistics shall be furnished, or what facts. The form of tabulation not being prescribed, would leave each superintendent to his own method or to the regulations of by-laws, and in that way the superintendent would quite naturally endeavor to conform to the statutory provisions as far as possible. For instance, in the State of New York, the organic law states what records shall be made, and the statistics are furnished in the annual reports presented to the legislature, but the law does not preclude other records or other tables in the report authorized or recommended by any scientific body, nor does it in any way prevent the presentation of statistical matter. I have noticed that in some States little or nothing is said in the organic law in regard to statistics to be reported. I think this difference in statutory provisions will always stand as a difficulty in the way of making uniform reports in the various States and Canada.

Dr. PRATT. I would like to ask Dr. Gray a question: Does he understand that the statutory provisions of the State prescribe certain tables and preclude others that may have scientific value?

Dr. GRAY. No; the statutes do not state what tables shall be presented, or what scientific work shall be done. They require that certain statistical facts shall be recorded, and they are furnished in the annual reports,—such as the name, residence, office, occupation—

Dr. PRATT. I know what they are in Michigan.

Dr. GRAY. Well; very much the same in Michigan as in New York. There have been efforts in the past to have this kind of information uniform and more specific. I have not questioned the original form of tables, but have followed them in general, and have given whatever was necessary to present the results of scientific investigation. I can't conceive of any objection to including the proposal of Dr. Pratt in the reports to the legislature as an additional table, as the legislature in authorizing the reports to be made practically includes all matters of interest.

Dr. PRATT. It occurs to me that where statutory requirements change the character of the tables of the Association, it would be very easy to fulfil the requirements of the statute and at the same time to add in the work a great deal of information that is of

scientific value. I think, notwithstanding the statutory requirements as to the tabular work of our annual reports, that we might very readily agree upon a tabulation of certain results, or facts, which would give in a few years an immense reservoir from which we can draw very important truths. Now, I would like to suggest just one idea, and that is, that in addition to giving the nationality of patients, to give the nationality of parents: whether native or foreign. It is becoming a serious question—the parentage of the native born; what is the parentage (as to nativity) of the native born. In my own State that inquiry has been made by the census officials during the past year. I hoped to be able to present a paper on this subject at this meeting, but unfortunately I received a letter from the Secretary of State stating that the footings can not be furnished until next week of the parentage of those who are native born; born here on our soil and become insane. I think, gentlemen, you will find it important in the future to make inquiries and get reliable statistics in this direction.

Dr. FISHER. I would like to explain the custom in Massachusetts. The Board of Health, Lunacy and Charity have furnished tables which have been adopted by all the hospitals in Massachusetts. There are twenty-four tables, and they are very nearly the same that have been used for many years by the British Commissioners in Lunacy. They are very complete and very plain on the points which Dr. Pratt mentions. For instance, they require, not only the birthplace of the patient, but that of both the parents, so that there can be no doubt of the parentage of every patient. These tables are certainly very complex, and cover every possible point, I should think. They are the result of the labors of the British superintendents, and have been in use for five or ten years in Massachusetts. I wished simply to call the attention of the Association to these very complete statistics. In regard to suggestions of Dr. Clark, I would state that for the last four years we have been in the habit of printing, in connection with the annual report, a report of the autopsies made by our pathologist, who is a well-recognized authority, and is also the pathologist of the Boston City Hospital, so that I have in that way been publishing minute and careful reports of all our autopsies. I should be very glad to fall in with any other plan that may be adopted by the committee.

Dr. GRAY. Mr. President—If it is contemplated that this committee is to enter upon the work of collecting matters relating to

post-mortems, as I understand from some of the remarks, as well as to get up suitable blank forms, I would suggest that it be enlarged to at least five members. It would be necessary for any practical working over so vast a territory as the United States and Canada, that each person should have a given district or section. In this way all the post-mortems in his district could be brought together and they could make a united report or make separate reports.

Dr. HILL. My idea was that this committee was not to gather any facts whatever, or make any report, but simply to furnish the superintendents with an outline of what data they should require when they make an autopsy, and then if any one desired to gather that material, he could do so in a satisfactory manner. It was certainly not my desire that this committee should gather any facts whatever, but merely to prescribe what method should be pursued in the institution in connection with the clinical records.

At the request of Dr. Andrews, the original resolution was read.

The President then announced the motion before the Association was on Dr. Gray's amendment to enlarge the committee to five members.

Dr. ANDREWS. If the duties are not changed by this resolution, I can see no objection to it, but I should decidedly oppose the idea which the doctor suggested—that we should make a collection of the data in the autopsies throughout the country. That would be too heavy a task.

Dr. Gray's amendment, enlarging the committee to five members, was then carried. Drs. Fisher and Bryce were added to the committee, and the resolution as amended was passed.

Dr. CHANNING. I would like to ask if the resolution presented by Dr. Chapin controls the order of business for another year.

The PRESIDENT. Yes.

Dr. CHANNING. It strikes me that meetings are not so interesting that are entirely without discussion of the papers read. I know that some gentlemen must have prepared something to present in the discussion, and I certainly took a little trouble to look up a subject in connection with a paper read here. I believe

something was said last year in reference to the matter, that I did not know about. That we have had no discussions this year on papers presented, I feel is quite a loss. Not that we want to spend a whole session in discussing a paper, or have rambling discussions, but I think the interest of the meetings would be greatly enhanced if there could be discussions after each session, or once a day, discussing two or three subjects together. But this meeting has gone along without any discussion whatever.

The PRESIDENT. If the discussions could be limited to a minute and a half we might be able to get through.

Dr. CHANNING. It seems to me that there is something between no discussions and too long discussions. Many other bodies make this distinction.

The PRESIDENT. Dr. Chapin's resolution is not authoritative; it is only a suggestion.

Dr. CHAPIN. The report contained a suggestion only as to the length of papers. There is also a resolution which, if adopted, would control the papers.

Dr. GERHARD. It appears to me, Mr. President, there are several recommendations in the report; one is to limit papers to a certain length of time, and another is to dispense with the programme which we had this year, and have had for a number of years, and simply expect members to prepare papers on subjects which they might select themselves. I think, before we adjourn, we ought to know exactly what is intended in the future, and whether, by adopting these suggestions, we would change the order of our meetings in the future. I think there is a little confusion on that point. The way it stands now every member is solicited to offer a voluntary paper. It is left upon voluntary work.

The PRESIDENT. The programme of the future will have to be decided by the future. The Association may adopt this report, or modify these resolutions. It is not authoritative; it is simply recommendatory.

Dr. Nichols moved to adjourn. Not seconded.

Dr. CHANNING. I would again ask, Mr. President, if the recommendations in the report carried with them the force of a vote, or simple recommendation? And if the business will be controlled at all by the recommendation?

The PRESIDENT. It will be controlled so far as this: the papers will be voluntary instead of reports of committees. That is all.

The Association will fix the time and other arrangements when they meet.

Dr. CHANNING. That is changing the past arrangement so largely that I wanted to find out whether it is to be an absolute order or not, or whether it required a more exact vote.

The PRESIDENT. It is simply reverting to the custom and order of forty years.

Dr. CHAPIN. The resolution which has been adopted does contemplate a change in our proceedings. It will be remembered that in 1882 the Association adopted an order, or resolution, creating several standing committees, members of which should be annually appointed by the President. I submit to this body whether this plan has proved successful; for one, I do not think that it has. If the resolution just passed is not reconsidered and rescinded all members are understood to be invited to prepare papers on any subject they may elect. These offerings will be voluntary, and the President will make no appointments to committees at this meeting. The committee have suggested that some portion, or the whole, of a sitting, be set apart for any miscellaneous business that may be presented, instead of injecting it at irregular times during the session. The committee also suggests that papers should not exceed thirty minutes, but did not feel warranted in offering a resolution. If the report of the committee shall stand approved it will be considered as the judgment of the Association upon this matter. I think the committee also had something like this in mind, viz.: that what this meeting might adopt, would come to the committee of arrangements for the next meeting in the form of a suggestion for its guidance, which, if followed, they would proceed to execute by preparing a programme or order of business before the date of the next meeting. It is important that the committee of arrangements meet and take joint action. When the secretary sends his annual announcements he might properly ask members for the titles of papers that are to be presented. In the preparation of a programme a preference ought to be given to such papers as are announced as ready, or in course of preparation. Other unannounced papers ought to take a chance for a hearing. If the committee is able to announce a programme a month before the meeting it will be satisfactory to a large number, and if the Association shall adopt the programme when it convenes, it then becomes an order of business to be followed by the presiding officer.

Dr. CHANNING. It strikes me that it is a great pity that during the whole session we have had no general discussion of these

papers, because, to me at least, what many of the gentlemen have to say—though they do not present papers—is fully as interesting as a great many papers, and if we have a clause in the resolution which limits the reading of papers to thirty minutes, I wish we might have added to that: at the close of each session a half hour will be set aside for the discussion of papers which are read during the session. I think that would be a proper way to get it in.

The PRESIDENT. The committee of arrangements will fix that.

Dr. CHAPIN. I did not say all I desired to say. I would suggest that this committee of arrangements furnish to every member of the Association a printed programme, say some three or four weeks before the meeting, which they submit as the order of the ensuing meeting.

Dr. GRAY. I am very glad to have a full explanation in regard to the force and intent of the recommendations of the committee relative to the manner of presenting papers, and how far they intended to rescind the action of 1882. I presume, from the wide range which the suggestions take in giving authority to the committee of arrangements and the adjustment of business and papers, that that committee would have the power also to fix the time to be given to each, so that papers over that length,—thirty minutes for instance,—might be so summarized, or a synopsis made, that the important points discussed could be brought distinctly to the attention of the members of the Association, for discussion. Thus in a paper—of whatever length—only such portion would be read as could be brought within the prescribed thirty minutes, and the substance of it presented in that way. The state societies, the American Medical Association, and other deliberative bodies pursue that course. I take it from the suggestions of the chairman, Dr. Chapin that that could be done, and I think that would cover the whole ground and make the matter satisfactory.

Dr. CHANNING. I do not see why, if that thirty minute clause is retained in the proposition there should not also be one in regard to the discussion of papers.

The PRESIDENT. The whole matter is within the province of the committee to recommend whatever is deemed advisable to the Association.

On motion of Dr. Nichols, the Association adjourned to meet in Lexington, Ky., the third Tuesday of May, 1886, at 10 A. M.

A CHAPTER OUT OF THE HISTORIC RECORD OF FORTY YEARS OF CEREBRO-SPINAL PATHOLOGY.*

BY DANIEL CLARK, M. D.,
Medical Superintendent Asylum for Insane, Toronto, Canada.

At the meeting of this Association, held in 1883, the writer was selected as chairman of a committee to "Report on the Progress of the Study of Cerebro-Spinal Pathology during the last forty years."

It was his misfortune not to be present at the meeting of 1884, when the report should have been presented, and therein he failed in his duty. As a result, no report was presented.

According to the old adage, "it is never too late to mend," so the synopsis about to be presented is an attempt to amend a broken promise and to fulfil a neglected duty. Of necessity my epitome of progress in this branch of pathology must be fragmentary. Volumes might be written on this subject as presented to us in medical literature. The writer has only taken up those salient points, which have seemed to him to be of greatest interest. They are small milestones—as it were—to encourage us in the march of pathological research; so this imperfect sketch is only a chapter selected out of the voluminous tomes of historic record.

It would be an endless task to attempt to give the state and history of brain pathology as they were known even forty years ago. It is true the microscope was then in use, and the appearances of nerve tissue as

*Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, June 18, 1885.

seen through it were recited in words or transferred to paper. This examination of diseased tissue was an advance on the former crude methods of investigation, when only what was evident to the touch and to the naked eye covered the whole field of exploration. Reference is only now made to post-mortem appearances and not to experiments upon living creatures, in order to learn something of vital function, for vivisection has been cleverly done from the days of Sir Astley Cooper, the Hunters and Marshall Hall down to the present time. The ultimate elements of brain tissue could not be properly seen through the microscope alone, and even when the grosser forms of them were identified, their appearances could only be transcribed to paper from what was retained in the memory. Photography, micro-photography and chemical reagents have brought out in bold relief a hitherto partially known region of infinitesimal physical structure. The cerebral tissue in health and disease was thus formerly seen only in a crude way, and this being the case no dependence could be placed on transcribed pathological appearances, as it is only by comparison between what is normal and what is not, that we can judge of impaired structure and function. The more tangible outlines of nerve cylinders and their contents were in the main correct, but the minute anatomy was unknown. Of necessity there could not be two diagrams of the same case accurately duplicated, when only memory had to be trusted. Our knowledge of the laws which govern blood supply; the endosmose and exosmose of life elements or of toxic and effete agents of mischief; the chemical and vital processes; the various forms of cells with their reproduction and decay; the static conditions necessary to normal mental activity; the reflex phenomena of function in disease

and health; the routes of pathological changes; the metamorphosis of physical and mental energy, consequent on change of nerve structure and the great abnormal results flowing from nerve depreciation as seen in nutritive effects throughout all parts of the body, are only a small part of the catalogue indicating the great strides which have been made in our more correct knowledge of animal function and psychological manifestations.

The list is not exhausted of the great discoveries which are due to the perseverance and intelligence of recent investigators. The localization of lesion and the grouping of consequent symptoms; the relation of hemiplegia to paralysis of the cranial nerves; the impairment of the organs of special sense in relation to the brain ganglia; the want of harmony in speech and ideation in certain mental and physical conditions; the reflex sensibilities under the influence of electricity; the clinical knowledge of such morbid conditions as cerebro-spinal, sclerosis, encephalitis, brain tumors and cerebral embolism; the relation of diabetes mellitus to disease in the base of the brain, and also due to some lesion of the great sympathetic, all these discoveries are due to the researches of to-day. In fact we now know that pathological changes are only perverted life processes and are carried on under the same general laws as are physiological activities. Disease is only another form of life, which is inimical to natural development. It is simply a vitiating form of nutrition, of function and of tissue change.

Any one who takes the trouble to read the books written on Practice of Medicine, or on Histology or Pathology, of even twenty-five years ago, will be struck with the general terms used in describing diseased conditions of structure. This is in striking

contrast to the minute nomenclature, correct topography and extended knowledge manifested by the keen investigators of to-day in their descriptions of morbid anatomy or living abnormalities. The vague statements formerly made in describing opacity and thickening of membranes; of the liquid deposits in the cavities; of the atrophy and density of bodily substances; of the varied and characteristic colors of morbid bodies and of the foreign deposits, might have been correct in the main, but they were only crude terms, which conveyed little information in relation to the causes which gave rise to these morbid processes or to the results which flowed from their presence.

It is true, in the cerebro-spinal domain, attempts were made to connect physical movements with definite mental states, but these expressions of opinion were merely inferential and based largely on psychical phenomena. Hence arose the metaphysical nomenclature of the varied forms of insanity, instead of the somatic classification, which is based upon bodily conditions. The former system has been the means of leading astray our medico-jurists in their definitions of insanity. This is not to be wondered at, when we consider how crude were the ideas of physiologists.

Among standard writers of only a quarter of a century ago, it was usual for them to say, *e. g.* that a thickened or attenuated cranium; a diseased dura mater; an inflamed arachnoid membrane or a congested pia mater, was always an evidence of insanity. Two distinguished anatomists of our student days in sober earnestness used to state that variations in the form of the sphenoidal bones, diseases of the choroidal plexuses or changes in the pituitary glands were the common causes of epilepsy and insanity. About half a century ago, Greding, the anatomist, regarded malformations

and diseases of the skull as the chief causes of insanity. Kiesloff, a German anatomist, thought mental alienation arose from contraction of the osseous canals at the base of the skull. Bayle (*Nouvelle Doctrine des Maladies Mentales*: Paris) attempted to prove that thickened and inflamed membranes of the brain were the cause of the malady. Guislain in his "*Traité sur l'Aliénation Mentale*," says he was sure insanity consisted of results from "a sanguineous erethism short of primary inflammation of the brain." Foville (*Dict. de Méd. et de Chirur. Prat., Art., Alién.*, 1833,) ascribed the mental affection solely to organic change in the grey matter of the cerebrum. Mason, Goode and Crichton revived Cullen's doctrine and thought insanity was caused by "irregular distribution of the nervous fluid." The celebrated Nasse and his equally famous compeers, Pinel and Jacobs, at this early time thought that unsoundness of mind was caused by some disorder of the thoracic or abdominal viscera. It is just to them to say, that in after years they modified their views and sought for causes centric as well as eccentric, and soon found them in abundance. Weichman ascribed the malady to a contracted colon. Shepherd said it was caused purely by disease of the blood. Heinroth looked upon it as "a purely psychical influence with which the mere animal organism has nothing to do."

Such diverse views might be quoted to any extent. They show how keen observers were led away by the fallacy of drawing general conclusions from special cases or specific lesions, and by joining an individual lesion with some mentally morbid manifestation. They failed in not grouping together a sufficient number of uniform cases to enable them to safely generalize. A great deal of the false theorizing arises from the jumping at conclusions without sufficient data upon which to base

a medical doctrine. We need not go beyond the numerous theorizers of to day to prove how readily novelties are dragged into a medical creed, and then the hobbyist searches for all apparent proofs to fortify his views. Such ignore the logical rule, that it requires not isolated incidents, but groups of indubitable facts to uphold a theory or to establish a medical formula. The medical literature of the last half century shows that all kinds of doctrines were propounded, for which there were few pathological facts to base them on. This tendency is to-day giving place to synthetical methods, and our increased facilities to trace the foot-prints of disease into its furthestmost recesses, have led us to see generic relationships not heretofore dreamed of. Before these discoveries we were looking at results, and were classifying them as diseases, when the causes were overlooked because they were beyond our ken. We were examining the branches and giving them classic names to find out afterwards that they had a common trunk and were of a common origin. This may be illustrated in many ways. For example, we now find that many diseases are results of nutritive disorder of the sympathetic or spinal centres. A number of this class of diseases are often concomitant with phthisis, pneumonia, ulceration of the bowels, and degenerative kidneys. The sudden invasion of diabetic coma; the chemical and organic changes found in acetonæmia; the morbid processes superinducing structural changes in Bright's disease; atheromatous and calcareous degenerations, and numberless other morbid changes and conditions are now known to have their primary impulses in one or other form of mal-nutrition consequent upon nerve degeneration. It is not improbable that spasmodic dysmenorrhœa, visceral neuroses, some nervous forms

of dyspepsia, certain *so-called* functional diseases of the heart, angina pectoris, the various neuralgias, have the same origin. In a large number of such diseases are found destructive changes in the multipolar cells, and in the same central regions are seen the axis cylinders very much attenuated, to merely shrunken tissue. In many such cases these otherwise active and necessary structures are changed so as not to be recognizable. A large number of heart symptoms, such as pulse intermittency, spasms, dyspnoea, or palpitation are now known to be neurosal in their origin, either through the vagus, the cardiac ganglia, or remote conditions of the sympathetic.

In this connection it is very striking to notice how the constituents of urine are determined by nerve conditions. The diabetes consequent on lesions of the organs in the base of the brain, or on some lesion of the sympathetic system, are evidences of this, and it is possible we might add to this category diabetes due to defect in the *so-called* chemical changes of the blood. It is my opinion that albuminuria is only a symptom of many diseases, and not a distinct malady in itself. It may be classed among the neuroses. We can even produce a change in the constituents or a superabundance of urine by diet without any disease existing, through the same influence.

We have a striking example of nerve influence in the kidney production seen in puerperal mania. Reference is not made here to that form of it superinduced by septicæmic poisoning from a disintegrating uterus, but to mania eccentrically produced from the impression made on the cerebro-spinal system through the great sympathetic. In the latter type there are found in the urine abnormal quantities of albumen. This is most noticeable if convulsions should be

present, and followed by any form of paralysis or sense perversion. As far as known its existence antedates the apparent physical results. The sudden appearance and disappearance of albuminuria is as strange a feature of kidney energy as are the abrupt invasion and departure of puerperal insanity itself, as seen in so many cases. Not only so, but in intermittent forms, the mental exaltation and this kidney elimination are co-existent, showing their interdependence from a common nerve influence. It is possible that the conditions favorable to the production of albumen may be found simply in the decomposition of normal elements in the blood-producing glands. As a rule, the more albumen there is in the urine the less urea and uric acid are to be found. There is either a check to the formation of these normal substances by the generation of albumen, or they are retained in the circulation as toxic agents, or contribute to the formation of albumen. It may be that on account of their liability to decompose and form new organic compounds, they may primarily produce disastrous results in the blood, and in a secondary way on the glandular system. The most common change of urea is into carbonate of ammonia, or into some other equally deleterious body with an alkaline reaction. We know the toxic effects of many vegetable alkaloids, so it is probable an analogous effect may be produced on the nervous system by an isomeric product of the animal economy. At any rate this hypothesis would explain, in such cases the sudden production of mania, of convulsions or recovery, or equally sudden death. As a matter of fact, organic alkaloids are found in the blood of puerperal females, but their chemical grouping has not been determined. We have found that blood possessed of these unnamed alkaloids is usually—

if not always—deficient in hæmacytes and hæmaglobin. It will thus be seen that specific diseases of individual organs can be traced to neurotic derangements. This is strikingly seen in skin conditions following some spinal diseases. The association of spécial lesions in the spinal cord so uniformly co-existent with degeneration of muscles, nerves and joints, is being closely investigated. From the condition of sections of the cord many of these diseases can be inferred. Cell change is followed by perverted function, or it may be permanent disease. This is seen in muscular atrophy—diffuse myelitis and anterior polio-myelitis. Sometimes these causes of degeneration commence in the cord, and from it initiatory abnormal changes can be traced, but on the other hand the first evidence of disease may be in distal parts of the body. In such cases it is probable that undiscovered change had primarily taken place in special or cerebral tissues. The nerve supply simply induces pathological changes in organs and other structures. The various changes in such diseases as those of paralysis, spasm and atrophy can only be accounted for in their invasion and progress by assuming the causes to exist from nutritive changes in the trophic centres, that is, when no traumatic condition is present. When centric and eccentric causes operate chronologically, the duality of malign influence is now named “deuteropathy.” Our physiology thus teaches us how much proper nourishment of parts depends on nerve conditions. I cut my chin with a razor, and for a few seconds the arterioles are contracted by the shock given to them through the divided nerves. This is followed by relaxation and bleeding. Spasm precedes temporary paralysis. The same is true of torn tissues of all kinds. The secondary results of injury are followed by immediate and un-

usual activity to repair damages. Immediate congestion takes place around the injured parts. Material in the shape of lymph and corpuscles is thrown out to fill up the breach. If the organizing and organizable products infiltrate into tissue, in which remain vitality, the united forces set to work to build up analogous structures to those injured or destroyed. If, on the other hand, the original parts should become bereft of all life, then the relieving forces make no attempt to revivify the dead. They at once set to work to amputate the useless incumbrance either by a cutting-off process or through absorption, followed by excretion. The whole of these wonderful life processes are only accomplished by the influence of nerve stimulation. The calibre of the vessels; the power to deposit selected material; the absorbing capacity; the defining power communicated to adventitious tissue, and the discriminating energy to build up all the varied anatomical component parts of new material lie primarily in nerve direction and vitality. Cut off this potent agent and death ensues in all the severed portions of any vital body. This general law of restoration, as seen in minor lesions, applies to all parts of the organism, and the failure to recuperate or to repair damages lies with nerve deterioration affecting sensibility, motion, selection or reproduction. The topography of lesions and histological conditions point to this radical truth.

Not only so, but disease in the nerve centres may be consequent on the condition of the blood and its supply. We must remember that blood is a living and vitalizing fluid. It is not merely a carrier of material like water, but also is a builder up of tissue and a repairer of waste. Poverty of blood brings about a brood of ailments, and among the many

such we have to include nervous diseases and insanity. These stand most prominent. Its oxidation and de-oxidation is not merely a chemical process, but is also a vital one. It is true that in the interchange of ultimate elements, chemical laws are manifest in the phenomena of heat and animal magnetism. Yet these are only concomitants of vital action and not a correlation of vital force. This might be expected when we consider that the dominion of nerve power is over all the processes of life; that it controls and modifies nutrition and function; that it guides all vital action and influences the causation and nature of disease. The change of chyle into blood is a glandular process, and is influenced by the condition of the nerve supply. Neurotic disease must affect the healthy condition of the blood cells and all the structures to which they carry vitality. It is therefore fair to assert that blood corpuscles depend on nerve vitality for their health and existence. It may be said, on the other hand, that too much importance is given to nerve influence in pathological research. It may be pointed out that the blood is a fluid filled with living organisms, which are the builders of the body, and by virtue of their motility can have no direct connection with our nerve apparatus. These myriad bodies are potent to repair waste; to induce disease or to give health independent of the nerve system. In making this statement it is forgotten that every individual corpuscle has a life, whose conditions of existence depend on the generative organs, to which it owes its being, and which change a chemical substance into a living body. This gland, or this system of glands, in which this metamorphosis takes place, determines the vital state of its creation. Such organs depend on nerve stimulation for their own health, and any changes such as originate—as in the turn-

ing of chyle into blood corpuscles—will determine the quality of the product. An unhealthy organ will elaborate a poor family of corpuscles, and these in turn will make feeble repairs of waste in all parts of the organism. Thus the condition of their secretor determines their capacity for good or evil in the system. Not only so; but nerve influence also affects all the fluids of the body in which are bathed our tissues. Nerve currents can be sent into all parts of our bodies even outside of nerve tissue. In these by-ways this subtle influence goes beyond and between the nerve tracks. There is no better medium apart from the nerves themselves than the blood fluid filled with living bodies and mineral solutions. This shows that these *ab extra* regions are under nerve influence.

Of late years the special nerve activities have been closely investigated. Many diseases which were formerly supposed to be entirely due to malign blood effects are now relegated to a class of morbid processes due to nerve depreciation. The nerve centres are known to exist from which emanate distinctive energies to focal points of assimilation. Those "trophic centres" can now be traced to those regions rich with multipolar ganglionic cells. We know that the masses thus endowed are in the fourth layer of the cerebral cortex: in the anterior cornua and in the posterior columns of the spinal cord. In all diseases affecting nutrition of organs, or in even physiological localities, where are found perverted functions, one or more of these nerve structures are found to be abnormally deficient in these cells, or they are curtailed in size, shape changed, or polar appendices shortened. This fact is strikingly illustrated in irritation of the fifth nerve. It is followed by skin eruption, ulceration of the cornea and inflammation of the eye. In paraplegia, with wasting

of the muscles, post-mortems show degeneration and paucity of the multipolar cells in the anterior cornua of the spinal cord. Progressive muscular atrophy has the same record and an analogous condition exists in posterior spinal sclerosis. In all forms of polyuria brain changes are found, but more particularly in the semilunar ganglia of the sympathetic. The co-existence of exophthalmic goitre in kidney complications points to morbid changes in the nerve system of organic life, with one common origin, but with different manifestations. Recent experiments show that centres of nutrition are located largely in the spine and spinal ganglia. The morbid influence of impaired nutrition consequent on diseased nerve tracts is much more extensive than was formerly supposed. We see it in diseased conditions, in which are sudden metastases, (such as exist in joints); also in deficiency of animal matter in bone; in want of tone in the surrounding tissues of joints, and consequently facility of luxation in articulating surfaces; easily produced ecchymosis in the insane, because of low vitality and in atrophies of organs without antecedent inflammatory processes. In simple atrophy (not the degenerative form); in chronic arthritis; in local paresis, we often find no initiatory inflammatory symptoms, but simply a wasting of certain structures from want of capacity to assimilate building up material. It is true we often find inflammation or traumatic injury in the vicinity of these depreciating processes, but in these we can trace no direct connection between the two diverse conditions. It is evident the active state in a distant part has affected the nutritive nerve centres, and indirectly the influence of normal trophic supply is found wanting.

In one class the centric disease is primary, and in the other peripheral in its origin. These conditions are

often seen in paralysis following apoplexy. In a few days after the attack we frequently see an invasion of bedsores consequent on low vitality. Slight pressure on the skin may be followed by bullæ and even eschars. These come on too suddenly after the central organ has been affected, to allow us to infer, that surface causes produce them in the ordinary way.

It is not to be forgotten that morbid processes wherever found are in essence identical even when existing in different structures. Inflammation, tumor growth, degeneration and hypertrophy are governed in their conditions of existence by general laws. These morbid states depend on the possibilities in the nerve influence and blood supply. This statement of a general law is also true wherever breaches of continuity exist. The situation or condition of a wound, an abscess, a cancer, or a fracture, may be varied, but this does not change the individual character of each, nor the distinctive vital processes involved in their pathological existence. The healing methods are the same in a cut, in nerve injury, in cicatrizing an abscess or in knitting together the ends of broken bones. Local circumstances may and do modify the character of the new structures, but the life work in building up any or all of our physical organization is uniform. The selective power to give individuality to structure is one thing and the general law of repair is quite another. The knowledge of this fact of generalization is tending to change our practice of medicine, our specifics are gradually being replaced by those therapeutic agents which supply merely material to the system. Nature is not dictated to in its heroic efforts to repair damages in the citadel of life, as it was heretofore in the empirical age of medicine. Pathology has done much for us in this direction. We virtually say to the master

builders, we will supply constructive material in the shape of fresh air, sanitary surroundings, nutritious food, phosphorized pabulum and moral treatment, but you are expected to build up the waste places and to give tone to flagging energies.

It will thus be seen that our busy workers have done much to advance our knowledge of disease. Many pathological conditions are so distinctive that we can now state with certainty the different forms of cerebro-spinal maladies, which were heretofore only judged of inferentially. For example: The brain of a paretic needs only to be seen to enable us to write out with assurance the etiology of the case. The condition of the blood-vessels and the presence of distinctive adventitious tissue give us a certain clue to syphilitic insanity. The atrophy of senile decay consequent upon increase of earthy substances and the decrease of normal constituents are certainties beyond peradventure and are paralleled in the shrinkage of the brain of the youthful insane. The psychological, the physiological, the vital and the chemical elements have disintegrated or are undergoing these series of descending processes in the inverse order of building up. They are returning in due procession to the primal condition of existence. We see all the gradations at once in brain atrophy and know their relation to dementia and mental extinction. Pathology has also shown the condition of the spinal cord in locomotor ataxia. Thus might be lengthened the list of those diseases whose manifestations show on the one hand, what mischief is going on in nerve tissue, and on the other, the conditions being given, we are able to formulate the results which flow from central lesions.

Although we may not yet be able to associate with all pathological changes, the particular genus and species of disease to which each belongs, we can now

with certainty predicate physical and abnormal conditions in all mental ailments, and prove the somatic origin of insanity. "To minister to a mind diseased," may in a secondary and poetic sense indicate a truth, but there is good reason to believe that if the instrument is kept in tune the musician will not fail to elicit from it the melody and harmony of nature. The truest light can not obey the laws of reflection or refraction as its rays pass through a defective prism. The turbid pool can not image the heavens above, neither in the same way can a clouded brain respond to the calls of its master.

Your patience must be exhausted in travelling with me over such a well known and well beaten track. All the subjects touched upon are matters of every day observation among alienists. It is well, however, to take occasionally a historic view of pathology and see what progress has been made in our special field of observation and study. The wide range of such a region compels me to condense my reflections and conclusions and to circumscribe them to the smallest possible space. Much must be omitted. The debatable ground of the area of localization in centres of function has not been touched. The controversy over the presence or absence of brain or spinal congestions in health and disease has not been re-opened. The seat of initiatory impulses in various reflexes is an inviting object of study. The co-ordinating forces of the dual nerve-centres or their want of co-partnership in disease are tempting subjects for reflection. The unexplored region of so-called functional nerve disorder is—so far—"a no-man's land."

These and many other points of intense interest must be left to other and abler pens to epitomise and record.

EDUCATION AS A FACTOR IN THE PREVENTION AND CURE OF INSANITY.*

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It doubtless will be regarded by some as a startling statement when it is declared that ignorance and insanity walk together hand-in-hand. Every superintendent of an asylum for the insane, who has had a large experience and an ample opportunity for observation, will bear testimony to the fact that a vast preponderance of the patients who have been under his care came from the ignorant and defective classes. "It may safely be said," says Dr. D. H. Tuke—

That there is a pre-disposition to insanity with those who possess a decidedly limited mental calibre. I do not mean anything like imbecility, but a mind of delicate structure, and narrow range of power. It is a frail bark, easily shattered, infirm of purpose, led this way and that by the currents of life, and quite unfitted to contend with the storms of the world. Such minds are, to a large extent, the offspring of civilization, for had they been born among savages they would not have survived to maturity. They gravitate towards a "Retreat."

This constitution of the mind must be distinguished from an allied but different organization, which is marked by native stupidity, and constitutes an infirm type of humanity largely met with in the lower classes, and especially the population from which the great county asylums of England are fed. On admission, "no good" is plainly inscribed on their foreheads; and their physical and mental antecedents convince the physician that recovery is doubtful, or if it should occur, that a relapse will almost certainly follow.

In these statements of Dr. Tuke do not we, who are engaged in the study, care and the treatment of the

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insane, see our own experience reflected? Perhaps it has been the good fortune of many brethren engaged in our specialty to meet with more fortunate and hopeful classes of patients than here referred to, but it has not fallen to my own lot to be thus favored, and I think I am safe in claiming that I do not by any means stand alone in this respect. When an insane patient is brought to the asylum with which I am connected, and it is found that he is a person of education, that his antecedents show that he has been intelligent and bright, I begin to search for the infraction of some physiological law, which has been pushed to such an extent that *excess* became the rule of his life, and as a result, the physical and moral deterioration, perhaps degeneration, engendered thereby, at last culminated in insanity. A case of this kind may be pointed to as illustrative of the inadequacy of education to save from insanity. It illustrates, at least, the faulty character of his education. Scan the history and scrutinize the antecedents of such a person, and you will generally find that he never learned the lesson of self-control; that he gave a long line to indulgence, a broad scope to passion, and through the aggressive encroachments of these, he succumbed. In the complex field of the causation of insanity, it is possible to find, in such a case, a predisposing influence in heredity; but we must remember that while heredity may, and does, become, under some circumstances, an important, perhaps a determining factor, in the production of insanity, it too frequently serves as a convenient scapegoat for not only the diseases but the depravities of men. To escape the possible dangers of heredity is to study the laws governing its operations, and further to fortify against it by calling into exercise those faculties, the development of which enables us to grow away from it. If

education be of that imperfect character which ignores and keeps out of view the possible strength of natural tendencies, we are in that respect uneducated; a weak spot, perhaps, is left in our mental make-up, and one which may prove a point of attack. A breach in the wall was left, or overlooked; it widens more and more, until the superstructure, itself, at last, falls. In such an instance, it is not so much the strong assertion of heredity, as a failure in brain building. If we would escape the terrors of the tiger's tooth, we must learn to avoid the society of the tiger, and to keep at a proper distance from him. On the other hand, if we venture too near him we may become one with, and a part of him; thus furnishing one of those instances of the difficulty of distinguishing man from the animal.

Comparatively few well-educated persons become insane; and when we scan the antecedents of that few we will find, as a rule, that excesses resulting in paralysis of will, or, if you please, loss of moral control, are at the bottom of the insanity of this class of cases. When insanity occurs among the educated, the causation can be found, as a rule, in the broad field of excess. When it occurs among the uneducated, it can be found, as a rule, in the still broader field which embraces the weaknesses which spring from ignorance. Excess may be regarded, in a certain sense, as weakness, but is not the weakness which is here associated with the undeveloped brain of the ignorant class.

As mental physiologists, we, who are dealing with the insane, find ourselves compelled to seek light through a study and observation of nervous and brain phenomena. Metaphysical speculation in our work will not do; we must seek our data through an investigation of the nervous and brain centres. In the language of an eminent divine: "The superstructure

can not get away from the substructure; the root anchors the stock and feeds it." It thus appears that the time has already come when it is not the physiologist alone who reasons from below upwards, or from the simple to the complex; or, as it was expressed by John Stuart Mill, "the upper end of physiology touches psychology." The position of the cerebro-spinal system, in its relations to nervous and mental functions, is well expressed by Prof. Draper as follows:

It may be truly said that the position of any animal in the scale of life is directly dependent on the degree of development of its nervous system. Through this it is brought in relation with the external world, deriving sensations or impressions therefrom; through this, also, all voluntary muscular contraction takes place. Whatever the grade of intelligence may be, the degree of development or expansion of the nervous system is in close correspondence thereto, from the lowest conditions in which it is first making its appearance in tribes which are scarcely distinguishable from vegetable forms, up to its highest elaboration in the cerebro-spinal system of man.

Before proceeding further it may be proper to remark that in our study and observation of nervous and mental operations, whether it be the simplest reflex action of the spinal cord, or a series of the most complex ideomotor movements of the brain, we can not escape the underlying and vital work performed by nutrition. The researches of eminent physiologists, especially those of Charcot, have resulted in demonstrating the existence of special trophic centres in the cord and brain. I am aware the existence of these special trophic centres is disputed by some physiologists, but we could scarcely ask for stronger proof than the progressive muscular atrophy which uniformly follows disease of the cells of the anterior cornua of the spinal cord. Then, again, the nutritive function of the posterior root ganglion of the spinal cord has been demonstrated.

Dr. Clouston, in his work on "Mental Diseases," page 102, describes a case of brain softening in which he could find on post-mortem examination, "no embolism or thrombosis of any of the arteries to account for the softening." He remarks as follows:

None of the current vascular or embolic theories explain such a case of brain softening. I think such a disease is the result of morbid trophic changes of purely nervous origin, and independent of the blood supply. Some of the modern authorities would apparently deny to the nerve tissue an inherent power to waste or disintegrate, or to become diseased independently of the blood supply or the packing tissue changes. I believe in no such theory. Over-mental work does not directly affect the blood vessels, yet it causes brain changes of the most serious kinds. Even when vascular changes are found, I believed them to be secondary in great measure to the alterations of nervous structure. The blood vessels and the neuroglia are, after all, the servants of the brain tissue proper, and this has not been kept sufficiently in mind in recent nerve pathology.

On the vascular starvation theory of brain necrosis it has been always assumed that some mechanical obstruction of a vessel by embolism or thrombosis is required. I have seen most of a hemisphere softened and bloodless, with every vessel fully patent. There had evidently been a spasmodic closure of the vessels, a true vaso-motor spasm of a prolonged and complete kind, starving one hemisphere of blood and killing the patient. I believe that frequently happens, and is the cause of softenings, epilepsies, spasms, and mental affections in different cases.

Such a case is a type of dozens, more or less like it, that I have seen in consultation, and that most practitioners in medicine have seen. It is most instructive, as showing that the mental functions of the brain were first to show, by their disorder, that the organ was beginning to be diseased, and that mental depression was one marked early symptom of the incipient trophic changes in the tissues. They confirm strongly my idea that mental depression, *per se*, is simply the functional expression of convolutional malnutrition.

Reference is made here to the nutritive function merely to show that even it, with all the intimate and

vital relations which it bears to the phenomena of organic life, derives its energy from the cerebro-spinal centres; and it may be proper to add that in order to seek the underlying and primary source of function, whether it be trophic, vaso-motor, excito-motor, sensori-motor, ideo-motor or inhibitory, we must look to those centres for the desired light. To the complex mechanism of the spinal cord we look for an explanation of much; to the vastly more complex mechanism of the brain we look for an explanation of vastly more.

It is by the exercise and regulated activity of the functions of any of the centres embraced in this complex mechanism that a higher degree of nervous, or mental power, is acquired. So far as the spinal centres are concerned, we observe in the early stages of infancy the reflex activity of the spinal cord. An ingoing, or afferent impression, calls forth from the centre an outgoing or motor response, and by a repetition of this excito-motor function, the centre acquires more and more power, until at last muscular movements, in great variety, become duly co-ordinated, and hence are easily and gracefully performed. This, in a word, is but the primary education of the spinal centres. This process begins in simplicity, and with more or less difficulty, and through various stages of development, and higher acquisitions, increased power and complexity of movements are reached. As the child develops, the sensori-motor activities come more and more to its aid, and it is the sensori-motor ganglia which furnish the basis of perception, and it is chiefly in these organs where perceptive acquirements are stored.

During the growing and formative stages of the child's life, educators should keep in view the importance of time as a factor in the development of the higher brain centres, through which the higher brain

functions—the conceptive, the reflective, and volitional—find expression. This, they will not, they can not, do, until they, themselves, become physiologists, and recognize the vital necessity of heeding the suggestions derived from physiology in teaching the young. I can not dwell on this point, but I can not refrain from entering an earnest protest against methods which entirely ignore the claims of nature in the education of the young. This is a theme which requires a more extended discussion than the time allotted me on this occasion will permit.

The idiot furnishes an illustration of the educational possibilities of the excito-motor, and, to a feeble extent, of the sensori-motor organs. There are no intellectual possibilities in him; for the higher brain centres, the ideo-motor, are either wanting or are so defective that intellectual expression or response is a physiological impossibility. Through his spinal ganglia, and those of special sense, he possesses a narrow range of motor and sensory possibility, or potentiality, and through patient and persevering effort on the part of others, he may, to a limited extent, become educated. By a repetition of certain movements, and by imitation, under the guidance of one having a clear conception of his state, these movements may, at last, become sufficiently organized in the spinal centres to enable him to regulate, in a measure, his muscular movements, and therefore be of use to himself. Without this training he is not only a subordinate, but an inco-ordinate, being, whose movements are feeble, irregular and purposeless, thus rendering him helpless; but with training, he is raised to such a standard of automatic and co-ordinating power that he is enabled to execute movements more or less clearly defined in their character. He has, therefore, through training, acquired a species of education through his

spinal and special sense centres, but there is nothing in the line of acquirement beyond or higher, for there is nothing beyond or higher to educate. He is mindless simply because he is brainless. Most assuredly a consideration of this character justifies the physiologist in regarding brain and mind in the light of correlative terms. The idiot does possess the potentiality of spinal and sense education, and it is only through a proper exercise of the spinal and sense faculties, a process by which nutritive aid is secured—always a vital condition of development—that he can become, even to a limited extent, educated.

If the congenital defects of the idiot included the spinal as well as the cerebral centres, all efforts tending to improve his condition would prove unavailing. If such were the case he could no more be taught to co-ordinate muscular movements than he now can be taught to reason. He simply possesses the conditions and possibilities of motor and sense education, but the fact that he can be educated, even on the limited scale here indicated, is a proof of the possibility and power of education. If, through patient and persevering effort, a being with the low and limited possibilities of the idiot, can be so trained as to store up in his spinal and sensory centres, motor and sensory acquisitions, or certain memories, the product of what he has been taught, thus enabling him to rise from a helpless to a helpful state, from a condition of chaos to one of order, from aimless to regulated activity, from weakness to strength, and from utter uselessness to a state wherein he is useful, in many respects, to himself, and perhaps to others,—if, I repeat, all these ends can be achieved in the case of the idiot, through education, what may we not expect from it, when wisely applied to one possessing the conditions

of normal brain development? The education of the idiot implies nothing that exceeds the limits assigned to the sphere of reflex and automatic activities, and they but dimly foreshadow the possibilities of the higher brain centres, the seat of ideo-motor and intellectual activities. The idiot, from his defective organization, is restricted, at best, to the narrow domain of the reflex and automatic, while the child possessing a normal brain organization is capable of passing from the reflex and automatic to the perceptive, and from the perceptive to the reflective, to the broader realm of the intellectual and of reason. He is not, in other words, compelled to stop at a way station which is but a short distance from the place of beginning, but he proceeds on, and on, until the seat of empire is reached, until he finds, as Huxley would say, where "field telegraphy and headquarters" are located.

Idiocy is a condition of brain defect; imbecility is a condition of brain weakness; ignorance is a condition of brain neglect. The former, as we have seen, precludes mental development; the second, from the operations of early morbid influences, permits it only to a limited extent; but in the latter, we have all the possibilities of mental development, and the grand results which may flow therefrom. It is an idea well worthy of serious reflection, that the difference in the mental possibilities of men is not so great, in the same civilizations, as generally supposed. I concede that instances may be found wherein the difference is marked, but I hardly think they are sufficient in number to impair the strength of the proposition here hinted at. There is not so much difference in us at birth, but the degree of our intelligence, strength of mind, power of reasoning, and the direction we give to our lives, will depend chiefly on the character of our environment and

to our educational advantages. If the higher brain centres, which are the seat of memory, of ideas, of thought, of reason, and volition, are not stirred into activity by the hand of education, they will remain as unproductive and unfruitful as a soil which may be rich in all the elements of vegetable growth, but yields nothing so long as it is untouched by the plow of the husbandman. The soil of the mind, like that of the field which lies fallow, must be cultivated in order to become productive, and if there be neglect in either case, it is not difficult to determine "what the harvest shall be."

It is only by a proper exercise of the higher brain functions that the dreaded results of mental stagnation may be escaped. A brain possessing all the possibilities of mind power will be enabled, only to a comparatively limited extent, to display that power, unless its functions be vigorously exercised. An uncultivated brain is at all the disadvantages incident to a conflict between weakness and power; and how feeble is such a brain to resist the temptations prompted by base desire, and how easily it may become the plaything and toy of circumstances. Certainly it will not be claimed by any one that such a brain is as powerful to resist the influences tending to the production of insanity as one which is equipped, fortified, and has been made strong by the intellectual armament supplied to it by the disciplinary forces of education.

The energy and variety of movement displayed by the muscular athlete implies a thorough education of the spinal centres. It is only through a long and skilful training that he can attain to such a standard of motor acquisition. This high standard of motor acquisition implies further, that, in the first place, there must have been the conditions of nutritive supply and motor

potentiality. A display of mental energy and power implies that these conditions exist in the higher brain centres of ideation and thought, and these centres, through appropriate exercise, become the seat, or the substrata, of mental acquisitions. I can not refrain from repeating the quotation: "The superstructure can not get away from the substructure; the root anchors the stock and feeds it."

Increase of nutritive activity accompanies the growth of all organs, whether they relate to the simplest or most complex; and it is through the subtle, plastic and solid work performed by this, the most fundamental of all functions, nutrition, which furnishes the foundation and support of all our acquisitions, whether they be motor, sensory or ideational. The congenital defect of the idiot's brain carries with it a corresponding degree of trophic defect—a defect involving the trophic centres of that organ; and hence, there can be no brain nutrition, and, consequently, no brain development. A normal nutrition, then, is the vital function on which all bodily and mental growth depends. The exercise of any organ, through its functional activity, involves nutritive expenditure, and the direction and amount of this expenditure will be determined by the special mode and degree of exercise. The spinal centres of the muscular athlete have, under the application of this principle, *grown to* a condition admitting of extraordinary power, and, at the same time, acquired an adaptiveness which fits them for the accomplishment of special ends.

The same is true of the higher brain centres. Nutrition is represented in the solid masonry of tissue building and the various modes of such building, and the brain is no exception, but a conspicuous example of the operations of nutritive law. Through sensori-motor

exercise we enlarge our capacity for perception, and the ground work of this enlarged capacity and increased and varied power, as manifested in broader, keener, and, perhaps, truer perceptions, is to be found in the nutritive supply, and also in the disposition of such supply, and the tendencies imparted by it through the different workings of the sensori-motor mechanism. If we pass to the still higher and broader realm of mental conception, wherein ideas become the product of thought, we have not passed beyond, or transcended the limits which physiological science assigns to the nutritive function. The lowest bodily and the highest mental organs are alike dependent upon it for life, growth, sustenance, mode of action and power. Interrupt this nutritive supply to the mental mechanism and what do we have? Brain atrophy begins, mentalization is on the wane, and, ultimately, dementia is the result. Check or embarrass the nutritive function and the law of dissolution will assert itself. Through the ascending steps of evolution we pass from the simple to the complex, and through the descending steps of dissolution we pass from the complex to the simple. Thus it is, that trophic action always plays a vital part in every species of growth and activity. Disease of any organ of the body implies impairment of the trophic function, and the brain is not an exception to the rule. In every case of insanity, whatever its form, the nutritive function of the brain is more or less involved, and, as a rule, our first steps in treatment are directed to the restoration of that function. It is the groundwork of all function, bodily and mental; and hence the reason why we recognize insanity, strictly speaking, as a physical disease. We have seen how the infant's growth is promoted by exercise, how its muscular movements increase and become easier by repetition; how the mus-

cular athlete, through exercise and training, acquires power, skill and variety of movement; and even how the idiot, through special effort in training, with his feeble potentiality, acquires a certain standard of power and regularity of movement. It is needless to observe here, that, in either of these instances, the power thus acquired through the education of the spinal and sensory centres, confers upon the individual an almost immeasurably increased ability to resist or combat damaging impressions, or assaults, which otherwise might prove disastrous. This view of the subject is equally applicable to the education of the intellectual centres of the brain. Education opens the paths by which the ideo-motor centres of the brain are reached, and through which they are impressed and aroused into ideo-motor activity. Like the education of the lower centres already referred to, obstacles and difficulties hedge the way at first, but by repetition of mental movements the work becomes gradually easier, ideas increase in number, power, activity, and regularity. We are not, in this connection, to contemplate the brain merely as a storehouse of ideas, but in addition thereto, as a workshop, wherein, through thought and reason, ideas are elaborated and compared, and thus is laid a foundation for the exercise of judgment. All this work, this complex work, is performed through the operations of the higher brain mechanism, supported and sustained by nutrition, which erects, all along their delicate lines and pathways, defenses and fortifications, which give to the educated brain, in the prevention of insanity, all the advantages over an uneducated one which strength has over weakness, which power has over feebleness, which intelligence has over ignorance everywhere, and in all the other relations of life. Can we resist the conclusion, then, that education

is the natural, the surest, and most reliable method of preventing insanity?

But the question will be asked, do not educated people become insane? Are not the hereditary tendencies in many so strong that it is difficult, perhaps, in some instances, impossible, to escape insanity? It will be readily conceded that the world abounds in faulty education, and especially is this true of children. Out of children men and women grow, and the direction and shape of this growth will chiefly depend upon the efforts of parents and teachers. A child born in poverty and ignorance, and who is permitted to grow up without education, and exposed to all the disadvantageous circumstances incident to an atmosphere of poverty and ignorance, will be inclined to reflect in his growth and conduct inborn tendencies; and, in addition to these he will absorb and assimilate the harmful elements of a damaging environment. He will, in other words, grow upon what he feeds. He will be the logical outgrowth and product of the circumstances surrounding his birth and growth. He is unfitted, when grown, to engage in any work involving the fierce competitions of life, for the reason that he is unequipped for the strife. If he attempt it he goes to the wall, for it is the fittest that survive. The brain of such a person may easily become the prey of imposition, of temptation, may revel in great expectations, when not suffering the pangs of equally great disappointments; the will recedes, and emotion comes to the front, and indiscriminate drifting follows. This is the mental soil in which insanity easily takes root and grows. He, fortunately, may escape, but he is not in an attitude, mentally, to make an attack or resist an assault.

Let us now take this same child, born of the same parents, and in poverty and ignorance, but subjected in

early life to educational influences, embracing proper physical care and training, proper mental discipline, and a moral atmosphere containing the germs of wholesome restraint, and who can doubt but that we shall probably have at manhood's estate, a person competent to meet the emergencies of life, one who is armed, equipped and qualified to perform his share of its duties, who is fortified against adverse circumstances, to which we all are more or less exposed, who is neither shocked nor overwhelmed by grave responsibilities, which full-fledged men never seek to escape. What about the hereditary or inborn tendencies? It is one of the most important missions of education to change the currents of inborn tendencies, and through its moulding and modifying agencies, to so shape and direct the life that it will grow away from them. Such education implies a recognition of the principles of physiological science and their successful application. A system of education that wisely embraces within its scope a psychology which is rooted in physiology, will repress the bad as well as develop the good in the growing child. It will turn the current of energy, naturally tending in the direction of evil, into channels which lead to usefulness and power for good. It does not destroy energy, but conserves it; it does not seek to banish force, but to correlate it. The salutary influence, modifying agency, and power of education upon the young, which have been claimed for it here, are exemplified in a remarkable degree in its effects upon the Indian children at Hampton, Va., and at Carlisle, Pa. The work accomplished here is merely referred to as an illustration of the power of education under peculiarly unfavorable circumstances. In view of these considerations, it is difficult to resist the conclusion that education may

become a power in brain building, and in the development of character, which will prove the strongest bulwark against insanity, and under circumstances, too, wherein heredity might become a dominating cause, were it not for the power thus acquired. If it be conceded that the position here taken is correct, how can we escape the conclusion that true education is more important than all other influences combined in the prevention of insanity?

In concluding this branch of the subject, I desire to quote an eminent author who remarks:

It will be admitted on all hands that education would be the strongest barrier against mental derangement which it would be possible to raise; a pity it is, therefore, that men are not agreed as to what is the best system of education.

I have refrained thus far in this discussion, with the exception of incidental allusions, from a consideration of the inhibitory function of the nervous system and brain.

Inhibition is regarded by that eminent physiologist, Michael Foster, as a fundamental property of nervous tissue, and, under certain conditions, will manifest its influence in all nervous systems, however simple or complex, in the frog, or in man. He remarks:

When afferent impulses reach a centre already in action, the activity of that centre may, according to circumstances, be either depressed or exalted, may be inhibited or augmented.

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The reflex action of the spinal cord, like other nervous actions, may be totally or partially inhibited, that is, may be arrested or hindered in their development, by impulses reaching the centre while it is already in action.

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All day long and every day multitudinous afferent impulses, from eye, and ear, and skin, and muscle, and tissues, and organs, are streaming into our nervous system; and did each afferent

impulse issue as its correlative, efferent motor impulses, our life would be a prolonged convulsion. As it is, by the checks and counter checks of cerebral and spinal activities, all these impulses are drilled and marshaled and kept in hand in orderly array till a movement is called for; and thus we are able to execute at will the most complex bodily manœuvres, knowing only why, and unconscious or but dimly conscious *h: w* we carry them out.

The importance of this inhibitory power which is manifested as a regulating, modifying and controlling influence on nervous and mental action, can scarcely be exaggerated, and is worthy of serious and profound consideration. It displays itself in modifying, regulating, and checking muscular movements; its power is still further illustrated in the influence which it exerts in the vital movements of respiration and circulation, and its highest correlative and supremest function is manifested by the will in controlling mental movements. In discussing the inhibitory function of the brain as applied to the control of these movements, Ferrier remarks:

The centres of inhibition undergo education along with the centres of actual motion during the growth of volition. The education of the centres of inhibition introduces the element of deliberation into volition, for action at the instigation of present feelings is suspended until the various associations which have clustered round any individual act have arisen in consciousness. The resultant of the various associations, the revival of which is conditioned by the present feeling and the concentration of consciousness which it instigates, is the motive which ultimately determines the action.

In proportion to the development and degree of education of the centres of inhibition, do acts of volition lose their impulsive character and acquire the aspect of deliberation. Present impulses or feelings, instead of at once exciting action as in the infant, stimulate the centres of inhibition simultaneously, and suspend action until, under the influence of attention, the associations engendered by past experience between actions and their pleasurable or painful consequences, near and remote, have arisen in consciousness. If the centres of inhibition, and thereby the faculty

of attention, are weak, or present impulses unusually strong, volition is impulsive rather than deliberate.

The centres of inhibition being thus the essential factor of attention constitute the organic basis of all the higher intellectual faculties. And in proportion to their development we should expect a corresponding intellectual power.

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In proportion to the development of the faculty of attention are the intellectual and reflective powers manifested. This is in accordance with the anatomical development of the frontal lobes of the brain, and we have various experimental and pathological data for localizing in these the centres of inhibition, the physiological substrata of this psychological faculty.

Dr. Clouston, in discussing the matter of inhibition, remarks as follows:

The doctrine of nervous inhibition and of inhibitory centres has done very much to definitize our notions in regard to the mental working of the brain. There is, of course, no proof of mental inhibitory centres, but there is mental inhibition, and a function always implies an organ of some sort. When it is demonstrated that the excitation of certain nerves caused, not motion, but stoppage of motion; when it was proved that the nutrition of the tissues was largely influenced by the increased or diminished potency of the capillaries or arterioles, and that the latter was dependent on two sets of nerves and two sets of centres, one to open and the other to shut those vessels, such physiological facts were at once correlated with the facts observed in conditions of mental excitation and depression, mental quickening and slowing, emotional super-sensitiveness and torpor; and the conclusion was arrived at that in the higher department there must be a somewhat similar apparatus for regulating the exercise of the mental functions of the brain, and that disorders of these would probably make all the difference between sanity and insanity, between self-control and insane impulses.

It would be an easy matter to furnish still further proofs and the testimony of other authorities in support of the importance of inhibition as a nervous and mental function. Lack of inhibitory power is frequently due to the defective training of the young,

especially in those numerous instances wherein children are permitted to give free rein to every desire, to the gratification of every wish, and thus through failure to exercise inhibition, passion comes to the front, asserts its sway, and dominates the life. The excesses of our own time, whose name is legion, are largely attributable to this defect in the education of the young. As a logical result of unexercised and weakened inhibition, we not unfrequently have those conditions of mental instability which culminate in insanity. The regulative principle which co-ordinates muscular movements, and thereby prevents "our life from becoming a prolonged convulsion," has its correlative in the regulative power and control exercised by the will on mental movements. Movement, to be of use, and to protect from danger, must have guidance. The movement of the swift running train must be furnished with the needed facilities for moderating and checking movement, or fatal collision may be the result. The movement of the huge ocean steamer as she speeds on her course must be under the control of the helm, or she drifts, and is at the mercy of the waves. The man who is defective in, or who has suffered loss of, inhibitory power is in a position to be blown hither and thither by the storms of passion, to become the toy and plaything of circumstances, and a ripe subject for insanity.

I am aware that quite a percentage of those who are received as patients at our asylums for the insane are reported by friends, at the time of admission, as having some education. It will quite frequently be found, however, that while they may have some book learning, they have, strictly speaking, very little education, and this little lacks in the essentials needed to protect the brain from insanity. The weak points have not been strengthened; the strong points have not been repressed

or correlated in a more wholesome channel of energy; and as a result we have the unbalanced state characteristic of the history of many who finally reach asylums. A few become insane who have enjoyed the advantages of a higher education, but in such instances we can usually find evidence of a strong hereditary tendency, or the effects of severe mental strain, or the result of prolonged indulgence in some damaging excess, or a combination of them all. In such cases the prospects for recovery, unless there be organic lesion, or senile changes, are vastly better than among the ignorant and uncultured. In the latter you have very little to return to, and that little may have suffered fatal blight by a first frost, which precludes all hope; but in the former you may have only to restore the normal nutrition of the brain in order to enable the mental functions to reassert themselves. A person of this class fortunately has within himself the resources to help himself. The insanity of the ignorant, on the other hand, represents a condition of comparative helplessness; the small stock once possessed, should it be partially regained, amounts to but little, and then it probably can not be retained; whereas the insanity of the educated is antagonized, under proper conditions, by the ideas in store, and by the acquired forces which they supply through reason and will.

On a previous occasion facts and figures were presented to this Association which conclusively showed that while one-eighth of the population of this country was of foreign birth, one-third of all our insane came from this class. I think this a point of considerable significance. The great mass of foreigners annually dumped on our shores very nearly represents a mass of ignorance equally great. If they have ideas they are different from our own; they have been bred to a different civil-

ization; they, and those who have gone before them, have, from birth, worn the shackles of *caste*; they think differently, speak differently, and, to a very large extent, poverty, as well as ignorance, has been a heritage. With such antecedents, and such a feeble equipment, we should not be surprised at the inability of so many of of them to endure the process of transplanting, nor should we wonder at their incapacity to meet the trials, exigencies and competitions incident to their new environment. The brains of many of these people are as incapable and unfitted for the tasks before them as a man would be for a foot race whose legs are paralyzed. In the struggle they drop out of the ranks simply because they are unfitted for the march. In a strictly savage or barbarous state it is said there is no insanity. In such a state all stand on the same dead level of ignorance, and hence the struggles and competitions incident to a civilized state do not exist. It does not follow by any means that barbarism is the true remedy for insanity, or that civilization should be regarded as its chief cause. In the barbarous state there is nothing observed beyond sensori-motor display, intellectual stagnation being complete, for the reason that there is nothing in the environment of the savage to arouse and call forth intellectual display; hence, so far as the higher centres are concerned, there is no brain building, and, therefore, no mental organization, and without mental organization there can be no insanity.

In the lowest condition of barbarism we should not expect to meet with insanity; in the highest state of civilization, a state of civilization which implies a certain standard of intellectual and moral development, we should not expect to meet with insanity. The former is below the line of its operations, the latter above it. It is in the intermediate

space between the two where the trouble is found. The mountain to be climbed is too steep and too high for some; some exhausted in their efforts to keep up with others; and then there are those who gather strength by the struggle, and thereby attain to a standard of power which enables them to surmount obstacles, carry burdens, and perform difficult tasks with ease. In the upward march of civilization the difficulty does not lie so much in the resistance of obstacles, the weight of burdens, and the severity of tasks as in the weakness and inability of those who attempt to overcome, carry, and perform them. Power is required—the power which knowledge alone can give.

The late Dr. E. H. Clark, in his admirable little book on “The Building of a Brain,” very clearly and forcibly presents some views which I can not refrain from quoting in support of the position taken in this paper. He says:

I once asked a successful merchant and manufacturer, who had accumulated a large fortune, how he managed to make money at a time when all others who were engaged in the same business were losing it. He replied that he had practically learned every detail and branch of his business so thoroughly that he could at any time, if necessary, take a place and perform the special work of any of his workmen. In one and a most important sense, he was made by and out of his business. His efforts to practically learn every detail had developed him. Suppose his business branched into one hundred different directions, terminating in one hundred different sorts of labor, each sort of labor affording occupation for one or more workmen. In becoming acquainted with each of these hundred details, and in supervising the workmen that wrought them out, he acquired a knowledge which no other experience or education could give him. So far he was made out of his business, developed by it. If in his preparatory training he had learned only ninety, or eighty, or fifty of the branches of his business, he would have been, *pro tanto*, less developed. His business consisted of three great departments—manufacturing, exporting, and importing. The management of

these reflected itself back upon his development and character. If he had neglected, or not acquainted himself with, one of these departments—exporting, for example—he would have been so much the less developed; he would have lost the special knowledge and training that an acquaintance with the exporting part of the business would have given him. This loss would, of course, be proportionately greater than that resulting from inattention to a single one of the hundred details which entered into the great whole of his business.

Observe that here are two distinct things which are not to be confounded. One is the growth or development of the man by reason of the special effort, training and knowledge, which came from learning every detail of his business, as well as from managing the whole; and the other is the character and amount of mental force thus developed: one is the process of development; the other is the result attained. One is the re-acting of the business on the man; the other is the merchant developed by the re-action. If while my mercantile friend was learning his business, getting this part of his education, he had omitted to become acquainted with a single detail, he would have developed just so much less mercantile power: he would have become just so much less of a merchant or manufacturer. When the power was acquired, he should exert or spend it in any direction he chose. First, there was growth, the force for which was supplied from a hundred sources; and, secondly, there was a power which was grown.

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Appropriate exercise of an organ aids its development and increases its power. Appropriate locomotion strengthens the legs; so does digestion the stomach; and vision, the eye. The normal performance of a function strengthens and develops the organ that performs it. The brain is not only no exception to this law, but is an admirable illustration of it. Brain-exercise, that is, cerebration, strengthens and develops the brain. If quality as well as quantity is included in development, no limit can yet be assigned to the extent of the latter, and, consequently, no limit to the manifestations of intellectual and spiritual power that may pour through the brain. I presume we have only an imperfect conception of what the human brain will yet attain to. Compared now as an instrument with what it will be ages hence, when both men and women are appropriately educated, when brains shall be built out of masculine and feminine organizations, that have been

appropriately trained, and from which hereditary evils have been eliminated, century after century, by the survival of the fittest, the brain of to-day, compared as an instrument with that brain of the future, fit for the use of a god, is as rude and imperfect as the lenses of two hundred years ago compared with the microscopes of the present day. It is the duty of our systems of education to evolve such brains.

It is quite possible that some of the views presented in this paper will not receive the sanction of all of my colleagues. I think it probable, however, that those who have had a longer experience and broader opportunities for observation than myself, will concede the intimate relationship between ignorance and insanity, and the discouragements under which we labor in our efforts to restore patients of the ignorant class to sanity. We must bear in mind when such patients are brought to us that they had very little to lose; that the little which they had was probably spoiled in the losing, and thus, being deprived of the conditions of restoration, our failure to cure in so many cases should not be a matter of surprise. The mass of chronic insane already accumulated in this country, and which is annually receiving large accessions, draws most of its recruits from this class. It must be remembered that comparatively few of this class recover, for the reason, chiefly, that they did not possess in the first place the conditions of recovery. True, they may be greatly improved by asylum treatment; may become capable, under proper guidance, of performing a fair degree of manual labor; but they seldom reach a point above the plane of purely automatic action. How can reason and volition return to those from whom it never departed? Education, education, I repeat, is the grand agency through which the conditions of reason and volition are supplied to the brain, and unless thus supplied, how exposed are we to insanity and how powerless to resist it.

On the other hand, how different with those insane patients who come from the educated class. Here we have, as a rule, something on which to hope and build. That, which seems lost may be only temporarily obscured, and when the cloud is dissipated, reason and volition resume their sway, and the man is himself again.

People of this class bring to us conditions, growing out of education, of recovery from insanity, which are not possessed by the ignorant class. I am free to acknowledge that people who rank among the educated, become insane, but such an acknowledgment does not weaken the position taken in this paper. Through unfortunate inheritance, errors of youth, the disadvantages of a rich parentage, accidents of later life, or, what is of still more common occurrence, the excesses following vicious indulgence, occasionally produce insanity in this class. In discussing the insanity of the French forty years ago, Esquirol wrote: "The change in our morals will be felt longer in proportion as our education is more defective. We take great care to form the mind, but seem to forget that the heart, like the mind, has need of education."

It is not claimed here that all the causes producing insanity in the educated class are attributable to the results of vicious indulgence and the controlling power of vicious propensity, but it is claimed that most of the insanity of this class comes from causes of this character. In a certain sense, the insanity here referred to might be charged to lack of education—lack of moral education. A recognition and thorough application of the principles of physiological science in early life, due attention to the laws and teachings of hygiene, an avoidance of early mental strain, coupled with the vital necessity of self-control, which means the due

subordination of passion to will, are among the essentials which are too frequently omitted in education, and through such omission, persons who are considered educated do sometimes fall a prey to insanity. On the other hand, those who have been early taught that they have bodies as well as minds, whose health, physical and moral, has been regarded, during the period of growth, as paramount to all other considerations; those who have sought learning from books, and wisdom from experience; who have recognized the claims of benevolence, and who have walked in paths of usefulness for the sake of being useful, represent a class composed of persons who very rarely knock at the door of insane asylums for admission.

In this brief and imperfect plea for education, and in claiming for the educated brain comparative immunity from insanity, I have aimed to consider the subject in the light of modern physiology; and the conclusions reached will be found, I trust, to be in harmony with the deductions of physiological science. It has not been my aim to discuss the subject in any but a physiological sense. The brain and mind have been considered as correlative terms, for in the light of mental physiology they can scarcely be regarded as otherwise. Such a view of the subject should neither diminish nor dwarf our conceptions of the priceless worth of mind so much as it should exalt our conceptions and enlarge our estimate of the brain's value. If mind be as dependent on brain for expression as physiology claims, if the two bear such a necessary and profoundly intimate relationship as our science teaches, how can we as physiologists, we, who are called upon to "minister to the mind diseased," estimate the worth of the brain by any other standard of value than that of the mind itself?

SHORT NOTES ON A CASE OF "FOLIE CIR- CULAIRE."

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Senior Assistant Medical Officer, Worcester County Asylum, England.

J. W., female, aged 47; married; no occupation.

Past History—She was admitted in 1873 into a Lunatic Hospital with delusional mania. At that time she imagined herself to be possessed of great riches, and had accordingly been giving extravagant orders to her tradesmen; she thought she was pregnant, and that she had been so for a long time; said her daughter had "smashed her ribs for her," and that she was a freemason; and made many other equally absurd and improbable statements. After being for three years and seven months under treatment at the hospital, and being no better, she was sent here on September 4, 1877. The notes on admission describe her as "very thin, and anæmic," but as possessing healthy thoracic and abdominal organs. She was in much the same state of mind as when admitted into the hospital, being conceited and amorous, and possessing many delusions as to her own importance, wealth and powers. The diagnosis entered in the books on her admission, was "chronic mania."

It was very soon apparent, however, that the term chronic mania was hardly a correct one; her mental condition was found to alternate between a mood of gaiety and self-satisfaction with exalted delusions, and one of sullen melancholy. Later on there was noticed to intervene between these two conditions a period of comparative sanity. The contrast between her mental state, subjective and objective, during her maniacal and melancholic periods respectively, was so great that she

has been for some years referred to by nurses and every one else as either "in her shell" or "out of her shell."

During the last two years the length of each stage has been approximately six weeks; I say approximately, for sometimes after being excited for three weeks she may remain depressed for a month, and then be fairly well for five or six weeks; the length varies, but is hardly ever less than three or more than six weeks. Sometimes, as I have said, the stage of comparative sanity is absent. When "out of her shell," she is talkative, excitable, fond of notice and flattery, and extremely deluded. She believes herself to be possessed of unlimited wealth; offers to present a new organ to the chapel; talks of persons in high ranks of society as belonging to her own circle of friends, and is altogether proud and overbearing. When in this state, she imagines she is beautiful, and tries to fascinate everyone at the weekly dance, hopping about in a ridiculous and fantastic manner, and trying to "flirt" (as she calls it) with her partner or any other man who will notice her. She can play the piano a little, and when in the mood I am trying to depict, will give a solo at the entertainment, whose character is strikingly descriptive of her state of mind, full of bangs and flourishes. If a member of the other sex enters her ward she is pretty sure to accost him as he passes her, attracting his attention in some way or another, and trying to engage him in conversation, during which, if he allows her, she compliments and flatters him, and is absurdly coquettish. Sometimes during this period of exaltation, she becomes querulous, and troublesome, accusing her nurses and other people of "want of respect," and refusing to do as she is wished. She sleeps badly, and frequently needs a nightly dose of chloral hydrate. From such a condition she passes more or less suddenly, often

in a couple of days, into one of an exactly opposite character, and of which the following note gives some idea: "After a transition stage of a few days, she is now "in her shell." It would be impossible to find an expression that describes more truly the change that has passed over her. A few days ago she was thrusting herself under observation upon every possible opportunity; she now retires into a corner of her ward, gets out of sight, covers up her head, and lies on a couch, taking no notice of anything or anybody, and being induced with difficulty to move when mealtimes come; she was then active, fussy and meddlesome, but is now careless, apathetic and indolent; from a state of hilarity, she has sunk into one of silent depression; her face, which before wore a smile of self-satisfaction and conceit, bears now plain marks of weariness, indifference and disgust with things in general. She will neither go to the entertainment, nor will she play the piano. Nothing is right for her, nothing is beautiful, or comfortable, or pleasant; all are her enemies, none her friends; she "might as well die at once as live such a life as this."

Careful watching will detect a certain amount of dementia following the melancholic season, and lasting for a few days; although allowing herself to be drawn into conversation, she maintains it badly; there is a general hebetude; her manner becomes feeble; she confuses names and has an incorrect appreciation of time, though whilst talking she is evidently doing her best to "pull herself together." After a few days in this dull state, her mind clears up to such an extent often that a skilled specialist might easily be puzzled to discover any evidences of alienation.

One might almost compare the different phases through which her mind passes to the cycle of the

natural seasons. There is a springtime of comparative sanity, during which are developing those ideas and delusions of power and importance whose maturity constitutes her summer; then comes the autumn of reaction, depression and hopelessness, to be followed by a winter of hebetude. As I have said, however, three only out of the four would be noticed by a casual observer. The short period of true dementia which follows the melancholia, being discoverable only by a close, clinical observation. Though there is nothing, perhaps, of especial interest in her case, it seemed to me worthy of record as an example of the more curious amongst the numberless types which recurrent insanity assumes.

NOTES AND COMMENTS.

THE TRIAL OF MRS. DUDLEY.—Unexpected verdicts in criminal trials have long ceased to create much surprise in this country. That which caused many persons to look for a different result in the case of this woman who shot down the man "Rossa" in open daylight, was the difficulty of recognizing insanity at all in some cases which exhibit wonderful calculation, adaptation of means to ends, apparent self-possession, and considerable reasoning power, combined with mother wit in word-fencing with lawyers. All this, however, is not incompatible with such a fixed mental disorder as may give a persistent and grave determination to the volition and personality of the individual. Besides, it is well known that such persons as a rule indignantly repudiate the allegation of their own insanity, even when, like Mrs. Dudley, they have to admit the fact of a previous confinement in an asylum. This fact undoubtedly, supplemented by Dr. Macdonald's very positive testimony, had great and decided weight with the jury, however coherent and rational her own conduct and language in court may have appeared. Very often the very brilliancy and vivacity of such a prisoner, running occasionally into eccentric or quick-witted drolleries or vituperation, together with the constant tendency to interrupt, to assert oneself, and to take part in all discussion going on, however natural it may seem from a lay point of view, may be simply an expression of overweening self-conceit and inordinate love of notoriety, due to a morbidly exalted mental state common in chronic insanity. The coarser implements of a judicial investigation, as we have before this had occasion to observe,

are hardly equal to the determination of the more subtle boundary lines between perfect sanity and the "mind diseased." On the whole, although this may be one of the "border line" cases that leave room for some controversy, we are disposed to agree with the conclusion expressed by the *New York Tribune*, that "surprising though it appears, the verdict was not incompatible with the conscientious performance of their duty by the jury."

As part of the literature of this notable case we may append the following letter which was written by the prisoner to an inmate of the Utica Asylum the day before her trial:

JEFFERSON MARKET PRISON,

June 21, 1885.

DEAR ———:

—— — asked me to write and let you know that the Supreme Court decided against her, and she was sent to the penitentiary on the 9th of this month. You must put "committed on the 9th June" on your letters when you write to her. I feel very sorry for her, and my counsel has promised to do all in his power to obtain her pardon, and I fancy that he will succeed in so doing.

The workmen have nearly demolished all our side of the Tombs, and all the women are in the Magdalen. I was not at all well and so the Warden sent me here as soon as they commenced pulling down, and I like it much better.

My trial is to come off to-morrow, but even if I am acquitted on the ground of insanity, I do not expect to be sent to Utica, as I prefer to go to Middletown Asylum. It is much smaller, and nearer to New York, so I shall not have the pleasure of seeing you in your mansion.

—— — has been convicted on one indictment and will be tried on another one this week.

—— — is still gliding gracefully about the Tombs, and I am waiting patiently for the penitentiary, asylum or liberty.

Thanks for the paper, but for mercy's sake let me have a little rest from my esteemed friend and distinguished victim. I am

bored to death hearing his name, and dread the revival of the whole affair at my trial. With best wishes, I remain,

Yours sincerely,

LUCILLE YSEULT DUDLEY.

The woman has since been consigned by the Judge to the Middletown Asylum.

ENGLISH ASYLUM SUPERINTENDENTS.—The London *Medical Times and Gazette* has for some time past been arrogating to itself the function of mentor in medical ethics. Under the general head of "Letters to Undistinguished Persons," several epistles have appeared in that journal, written by a pseudonymous counsellor, and the reader has been gratuitously admonished on a great variety of topics—from the proper disposition of his hat and cane while visiting his patients, to the more important *modus operandi* in consultation. So long as our contemporary confined its strictures to matters of taste and etiquette, no one had occasion to complain, though many must have smiled at the charming display of *naïveté*, and questioned the soundness of some of the advice proffered. But when the *Medical Times and Gazette* takes upon itself to write one of its letters to "The Superintendent of a Lunatic Asylum," wantonly perverts the truth and holds up to scorn and contempt our British Asylum *confrères*, we may allow ourselves the privilege of a few words in protest and vindication. The letter in question appears in the issue of June 20th, ult., and is signed by "A Former Patient," a most felicitous signature indeed, for the communication bears striking resemblance to the scurrilous screeds that occasionally find their way into print from the pens of half-cured lunatics. After an introductory reference to the "boundless despotism" of asylum superintendents, the enquiry is made as to what qualifications these gentle-

men bring to the discharge of their momentous duties. The querist's answer is, we have no hesitation in saying, a libel on the qualifications of English superintendents: "Your diplomas are the very lowest that are compatible with the practice of your profession. They are the irreducible minimum. They are just sufficient to qualify you for the house surgery to a country hospital, but no hospital in London or any large provincial town would admit you on its staff, etc., etc." This is but one of the many counts in "the former patient's" indictment, but as the others are of a piece therewith, one refutation will suffice for all.

Let "the former patient" consult Churchill's Medical Directory and he will find, as we have found, that, taking the superintendents of the United Counties and Borough Asylums in England and Wales, sixty-five in number, as a basis of calculation, sixty per cent are graduates of universities. Over nine per cent are graduates of the University of London, whose medical degrees are admittedly the most difficult of attainment. Over twelve per cent graduated with honors, and fourteen per cent were medallists. Over eleven per cent are Fellows of Royal Colleges, while several are exhibitioners and prizemen.

We need say no more, and we should not have offered even this slight remonstrance, did we not fear that there may be other disaffected persons in England who, following a cisatlantic precedent, will be quick to seize upon our contemporary's misrepresentation, and assuming it, for their own evil ends, to be gospel truth, will use it as a text to malign our transatlantic brethren in similar diatribe.

MICHIGAN ASYLUM FOR INSANE CRIMINALS.—We have received a copy of the law passed by the legisla-

ture of Michigan in June, 1883, providing for the location, erection, organization and management of an Asylum for Insane Criminals, in connection with the State House of Correction at Ionia in that State, and presently to be opened for patients. If we are not mistaken this is the second institution of the kind provided for in the United States. The system is one which we believe is bound to make its way into the lunacy administration of the whole country. The evils of criminal association with the average class of patients are too obvious and far-reaching to be ignored.

The institution at Ionia appears to be organized on the same general principles as most of our State asylums, making the medical superintendent the chief executive officer, holding him responsible for the condition and success of the management, with the nomination of his co-resident officers, &c. The definition given in the law of insane criminals, in the cases contemplated by the Act, is persons accused, but escaping indictment, or acquitted on trial, for the crimes of murder and rape, or attempts at either, highway robbery or arson: or any persons convicted and in confinement for these crimes and becoming insane. Moreover, an express clause is added, providing for the summary transfer to this asylum of any patients in other asylums who, while under treatment, shall commit any act of homicide, or develop unmistakable *homicidal tendencies*, rendering their presence a source of danger to others, &c.

The crimes here mentioned are limited in number, and it is doubtless wise to be circumspect in inaugurating legislation of this class. There is such a thing as a *criminal class*, made so by education and bringing up. An act of insanity, which often is the first proof and symptom of insanity, which in a sane man would be a high crime, is different from an act which only shows

the habitual tendency of a member of the criminal class. Perhaps it is this consideration that has caused the selection of the more heinous offenses in the Michigan law.

ANOTHER ASYLUM FIRE.—At 12.30 on the night of June 7th, a fire broke out in the right wing of the centre buildings of the Lunatic Asylum at Williamsburg, Va., and before it could be got under control every thing was destroyed. The burned buildings comprise the original portions of the institution and were built a hundred years ago. There were two hundred female patients in the burned building, all of whom were rescued safely, except one woman who was burned to death. Another female patient, after being brought out of the building, wandered off, and was subsequently found drowned in a creek. All of the women were taken to the William and Mary College. The other wards, containing nearly three hundred male patients, were also emptied. They were allowed to go at large, but were generally tractable, and did not wander off. The loss is \$140,000. The origin of the fire is not known.

HONORS TO ASYLUM PHYSICIANS.—Dr. George C. Catlett, Superintendent of the St. Joseph Asylum, Mo., has been elected President of the Missouri State Medical Society. Dr. Judson B. Andrews, Superintendent of the Buffalo State Asylum, has been chosen President of the Erie County Medical Society. Dr. F. S. Crego, of the Buffalo Asylum, was presented by the attendants and others, with a handsome diamond, on his retirement from the position of assistant physician, which he had worthily filled for several years.

DR. GRANGER ON MONOMANIA.—By error after proof-reading, the names and quoted comments of several authors were misplaced in Dr. Granger's article on monomania in our last issue.

Drs. Spitzka, Clouston, Bannister and Gorton should have been classed with Drs. Bucknill and Tuke, and Dr. Maudsley, on page 2, as employing the term monomania, while Dr. Blandford should have been included among those who do not use it.

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Members of the Association will confer a favor on the Editors by making known any inaccuracies that may have occurred in the above list.

AMERICAN JOURNAL OF INSANITY, FOR OCTOBER, 1885.

REPORT ON NEW REMEDIES:*

FLUID EXTRACT CAMELLIA AND HYOSCINE HYDROBROMATE.

BY JUDSON B. ANDREWS, M. A., M. D.,
Superintendent State Asylum for the Insane, Buffalo, N. Y.

Tests in regard to the action of drugs, to be of any real or permanent value, must be made with scrupulous care, with unquestioned honesty and without preconceived theories. They must be confirmed by the concurrent testimony of many observers, and established by the experience of the profession, before the drug can assume its true position in the materia medica. The difficulties encountered in this work arise from the compound character of so many drugs and from the lack of exact knowledge of the elements, which compose even the most simple of organic substances. Analytical chemistry in isolating the active principles and presenting them in a concentrated form, easy of division and administration, has given substantial aid in reaching definite conclusions as to their physiological effects, on which alone we can safely base the practical use in combatting disease. Another serious difficulty in arriving at the exact truth is the fact that we have to deal with the most uncertain and unstable of animate objects, the human organism. The peculiarities and idiosyncrasies of the individual constitute such excep-

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

tions to any general conclusions as to throw doubt upon our observations, and prove to us the inexactness of our knowledge.

All investigations into the action of drugs are naturally resolved into the physiological and clinical. The former must precede the latter in any intelligent handling of the subject. We must establish the action of the remedy in the normal healthy system before we can use it intelligently in the abnormal states.

Physiological experiments are naturally divided into those made upon the lower animals, and those in which man is the subject. The first of these can be conducted best in the laboratory of the physicist, but the latter can be successfully carried out by the physician upon himself or upon the person of others.

There are also two methods employed clinically: one the gathering of statistics as to the results of treating disease; and the other, individual observation at the bedside. The statistical method is of all modes of research the crudest and the most unscientific, the most open to inaccuracy and error, and as a natural consequence, that which has been least fruitful in good results. "Of all the advances in practical medicine," says Prof. McLagan, "I can not recall one which owes anything to statistics. I can not mention a single disease in which statistics have inaugurated a better mode of treatment. The mode of research by individual observation is that on which we have to rely; it is that by means of which the most important advances have been made in the past; it is that too by which all methods of treatment must be tested, and on the results of which their adoption or rejection must depend." (*Therapeutic Gazette*, for October, 1884.) This statistical method is one with which the members of this Association are made familiar, as we are often

called upon to give the results of our experience numerically by those who would take advantage of the labors of others, frequently only to advertise themselves in some specialty.

In the investigations we have to present we have joined the two methods, the physiological and the clinical, by individual observation. We have employed the sphygmograph as best representing the effects of remedies on the circulation. Our observations have been made upon camellia and hyoscine.

The fluid extract of camellia or tea has within a few months been offered the profession, by Dr. E. R. Squibb, the well known pharmacist of Brooklyn, to take the place of guarana and coca. He states "that the testimony in regard to the effects of tea, coffee, Paraguay tea, guarana and kola nuts is all of a similar character to that upon coca. Each of these substances seems to have come into use independently in widely separated countries, to produce the same effects, viz., to refresh, renew, or sustain the physical or mental organism, and it was a curious surprise to find, after they had been long used, that although each came from a different natural order of plants, the same active principle, namely, caffeine, could be extracted in different proportions from all. It is now still more curious to find that for centuries another plant, namely, "coca," yielding a different principle, has been in use for similar purposes, the effects of which differ as little from those of tea, coffee, etc., as they do among themselves. Yet cocaine is chemically very different from caffeine, simply producing a similar physiological effect in much smaller doses!" In the experiments by Dr. Squibb he made the tendency to counteract sleep, or to promote wakefulness the measure of the effects of caffeine in the tea and coffee, and compared them

with those of coca. In these tests he found that three grains of caffeine were equal to three fluid drachms of the fluid extract of coca, and to "seventy" minims of the fluid extract of camellia. This seventy minims of the fluid extract equals seventy grains of tea, and this yields 2.01 grs. of caffeine. From this the first notable fact is that about 2 grs. of caffeine in tea, in its natural condition, is equivalent in effect to 3 grs. of caffeine extracted from the tea and used as caffeine. Each fluid drachm of the camellia extract yields 1.72 grs. of caffeine. In the experiments we have made with the extract of tea we have considered it as caffeine, and have given attention to the effect of the drug on the heart, which we present in the sphygmographic tracings. In all of these physiological experiments care was taken to eliminate all known sources of error and to record the exact facts of the various observations. Perfect quiet was enforced for a time before, and also during the period of the experiment. Only necessary conversation was indulged in that the pulse might respond only to the action of the drug; the experiments were made at different times in the day and evening, upon different persons, with doses of varying size, but always within the limits of producing a physiological effect.

The *first* experiment with the camellia was made in the afternoon. I took 70℥ of the extract=to 2 grs. of the caffeine. The pulse beats were then 88 to the minute. In 15 minutes they were 82, and notably firmer and of increased volume; in 30 minutes they were 80, and of the same character. The experiment was then interrupted by my being called away.

The *second* experiment was made in the evening commencing at 9.15. The dose was 80℥=2½ grs. of caffeine. The pulse stood at 80—at 9.30 at 70; at 9.45,

72; at 10.00, 72; at 10.30, 70; and at 11.00, 70. There was the same increase in force and volume as noted in the first experiment.

Special attention was paid to the stimulant effect in warding off sleep and promoting wakefulness, but none existed. I retired immediately after the last record, and went to sleep at once, as is my usual habit.

In the *third* experiment I took 90m = to $2\frac{4}{7}$ grs. of caffeine at 4.45 P. M. Pulse was 76. At 5.00 P. M., it had fallen to 70; at 5.15 to 66; at 5.30 it was still 66, and at 6 o'clock it was 72. After supper, at 8 o'clock, I took a second dose of 90m. Pulse stood at 84. At 8.15 at 82; at 8.45 at 80; at 9.00 at 76; at 9.15 at 72; at 9.30 at 74; at 9.45 at 78; at 10.00 at 80.

In the *fourth* experiment I took 3ii of the extract = $3\frac{3}{7}$ grs. of caffeine at 9.00 P. M. The pulse stood at 88; at 9.15 at 80; at 9.30 at 78; at 9.45 at 76; at 10.00 at 74; at 10.15 at 72; at 10.30 at 70; at 10.45 at 70; and at 11 o'clock at 72.

In the subsequent experiments the sphygmograph was employed. I took 3ii of the tea = $3\frac{3}{7}$ grs. of caffeine at 8.00 P. M. The pulse then stood at 84, and tracing marked No. 1 was taken. At 8.30 the pulse



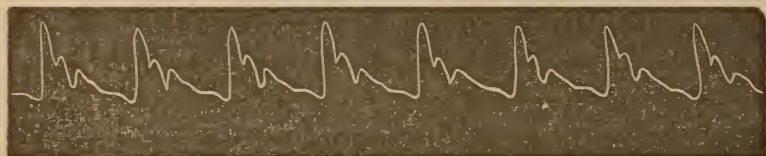
[No. 1.]



[No. 2.]

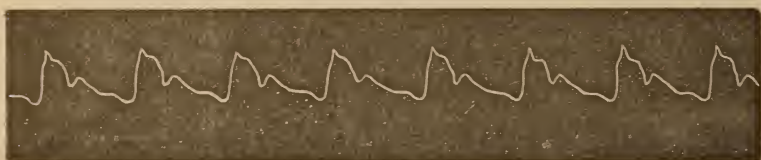
was 80, tracing marked No. 2 was taken. This shows increased tension, more sharply accentuated diastolic,

greater force and slowness. At 9.15 pulse was 74. At 9.30 took a second dose of 3ii, pulse was 72, and at 10 o'clock was 70. Tracing No. 3 was then taken.



[No. 3.]

It has the same peculiarities as the last one, but with a tendency to a second dirotic wave showing increased force. At 10.15 the pulse stood at 60, and tracing No. 4 was taken. This shows the peculiarities of No. 3



[No. 4.]

greatly exaggerated. At 10.30 it was 72, and at 11 o'clock it was 76, when tracing No. 5 was taken. This



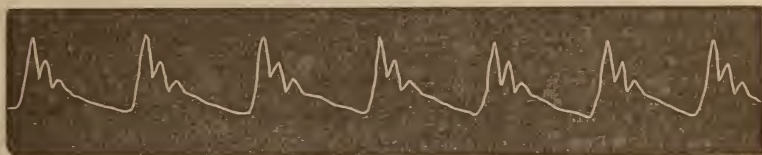
[No. 5.]

shows a most extraordinary arterial tension nearly equal to the first beat of the heart.

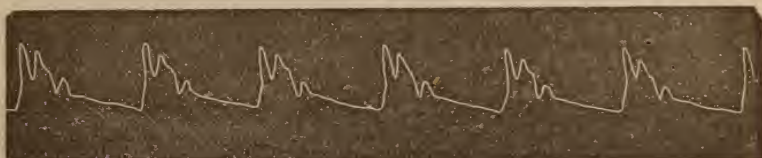
The next experiment was made with 3ii of the extract with the same general results, decrease in the number, but increase in the force and volume of the pulse beats.

On the following day another dose of 3iii was taken= $5\frac{2}{7}$ grs. of caffeine. The pulse beats were 94, but in a half hour they were reduced to 84, and in an hour to 80, where they remained for three-fourths of an hour, when they rose to 84, and subsequently to 86.

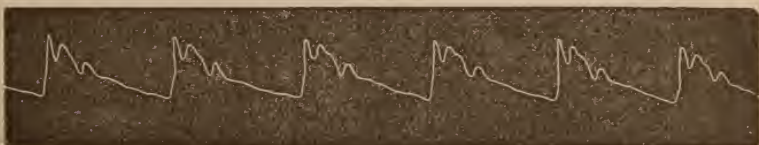
Experiments were then made upon other persons. In the case of a man seventy years of age, the tracings were so marked that we present them. He was given 3 ii of the tea—to $3\frac{2}{7}$ grs. of caffeine at 4.10 p. m. His pulse was then 66, and tracing marked No. 1 was taken. At 4.40 the pulse was 58, and tracing marked No. 2 was taken. At 5.10 pulse was 54, and tracing No. 3



[No. 1.]



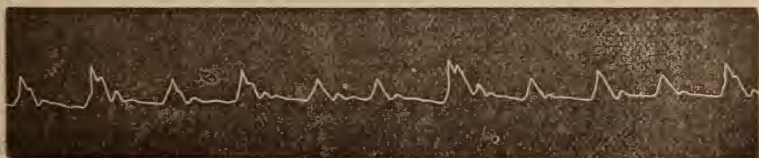
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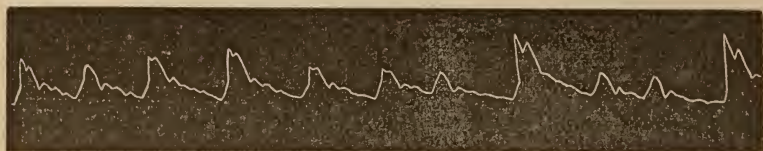
was taken. This shows a great increase of tension and a magnifying of all the peculiarities of the pulse.

In another case in which the patient was suffering from heart disease diagnosticated as hypertrophy with a mitral regurgitant murmur, 3 ii of the extract= $3\frac{2}{7}$ grs. of caffeine were given at 2.30 p. m. Pulse was 84, and tracing No. 1 was taken. At 3 o'clock pulse was 80,

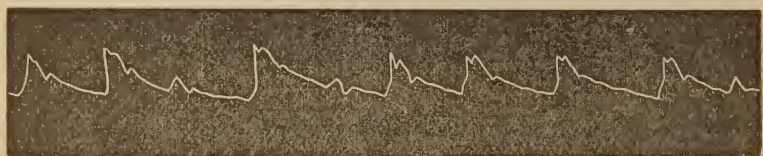


[No. 1.]

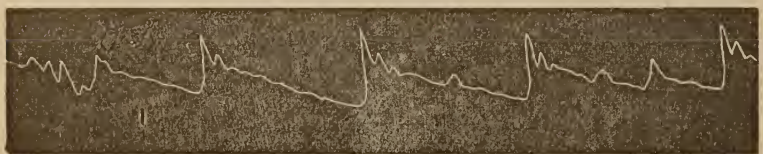
and tracing No. 2 was taken. At 3.30 pulse at 78, and tracing No. 3 was taken. At 4, pulse at 80, and tracing No. 4 was taken. At 4.40 pulse was 82, and tracing No. 5 was taken. The changes presented in



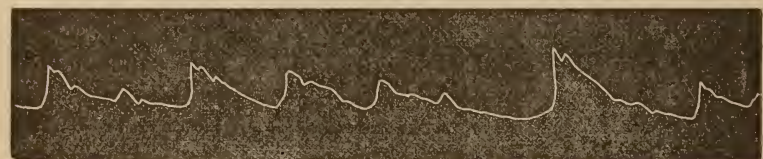
[No. 2.]



[No. 3.]



[No. 4.]



[No. 5.]

these tracings give a fair illustration of its value as a heart tonic, especially in mitral affections. Now as to the deductions to be drawn from these experiments. There is a remarkable uniformity in the action of the drug, in the decrease in the number of the pulsations from 10 to 24 in different experiments and under the influence of varying doses, and in the increase in the force and volume and of the arterial tension.

The full influence of the remedy was experienced in from one-half to one hour after administration. After

remaining stationary for about one-half hour, the pulse began to increase in frequency and regained its normal condition after about another hour. The effect mostly disappeared in three hours from the time of taking it. No wakefulness or increase of mental activity was experienced in any of the cases experimented on. This may be due entirely to individual idiosyncracies, and to the times when it was administered, as the stimulant effect of the drug is well established. We have had but a limited opportunity to use the extract in cases of disease for the purpose for which it seems especially valuable, viz.: as a heart tonic. In one case of extreme anæmia, with feeble and rapid pulse, varying from 120 to 140, it was given a short trial, but the emergency was such that I did not feel warranted in trusting to a remedy with which I had had so little experience, and digitalis was then given with good results. It was subsequently tried again in the same case for a few days, with benefit upon the action of the heart, but its stimulant effect was so marked in the production of wakefulness that it was discontinued. In another case of the same general character, with a pulse of from 106 to 116, a dose of ʒii repeated three times a day gave a reduction to 90, with increase of force and volume. This was continued till the patient was built up by constitutional treatment and no longer needed the remedy. In a case of nervous hysterical condition the same dose was given as a heart tonic with marked benefit. In a fourth case, with feeble circulation, the extract was taken for two months, with relief of the symptoms, by increasing the force of the heart.

While investigating the action of camellia my attention was attracted to an article in the *Therapeutic Gazette* for October, 1884, by Prof. Dujardin Beaumetz,

on the new cardiac medicaments, or those which have been introduced within the last five years. He speaks of convallaria, caffeine and nitro-glycerin, the first two as being applicable to mitral affections, and the third or nitro-glycerin, as of use in diseases of the aortic orifice, and of the aorta itself. He describes the effect in moderate doses, upon the circulation, as diminishing the pulsations, while augmenting the vascular tension. This, it will be noticed, is fully confirmed by our own observations, and by the tracings presented in this paper. It acts then as a heart tonic. In larger doses the hearts beats are accelerated and become irregular. This is the toxic effect, and caffeine has become a poison. He also claims for caffeine special power as a diuretic, and sustains this claim by reference to other writers, whose statements are positive as to its great value in dropsy, and says further that the great advantage of caffeine is that it appears to possess diuretic effects even when the kidneys are badly damaged, and you may get good results with it in advanced stages of heart disease. You will be able to see in our hospital service veritable resurrections effected by this marvelous therapeutic agent, and this in aged persons. Therefore you ought to have these facts always in mind, and remember that in the asystolic period, when you have exhausted the remedial powers of all other cardiac tonics you may still obtain signal success with caffeine.

He recommends its use either by hypodermic injection or by the mouth. In the latter case in doses of from 4 to 8 grs., repeated 3 times a day. The larger doses are needed to gain the full benefit of the remedy as a heart tonic and diuretic. In our experiments with the camellia, while getting the effect of the caffeine as a cardiac tonic, we did not experience any noticeable effect as a diuretic. This may be due in part to the fact that the large doses recommended were not used.

The value of tea as a heart tonic was first brought to my attention by Dr. Gray while I was an assistant in the Utica Asylum. We then used a strong decoction in tablespoonful doses, repeated every twenty to thirty minutes, in cases of threatened failure of the heart, and I have since used it with benefit in the same class of cases. The present investigation explains most satisfactorily the nature and effect of the remedy

We have proved, I believe, beyond question, that in caffeine we have a most valuable cardiac tonic, rivalling in certain cases digitalis, convallaria and nitro-glycerin. Now if, as Dr. Squibb asserts, 2 grs. of caffeine in tea is equal to 3 grs. extracted, we have in camellia extract an eligible mode of administering this agent. It is inexpensive, readily obtained, easily taken, and not likely to disturb the most delicate stomach.

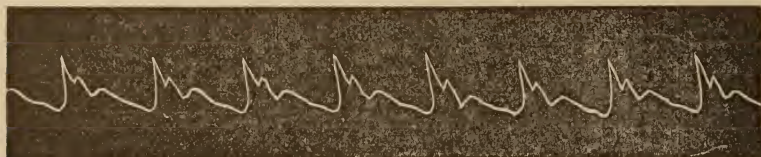
We have not studied the effects of tea as a cerebral stimulant, as we originally intended to do, nor as a substitute for caffeine in the uses for which it is recommended in the materia medica. This is a proper field for investigation, which we hope may receive due attention. We must now satisfy ourselves by commending it to you as a substitute for caffeine as a heart tonic.

HYOSCINE.

Hyoscyamus, which has from time immemorial been held by the medical profession in such high esteem as a hypnotic, bids fair, by the aid of modern chemistry, to surpass its former reputation. It is but a few years since, that the alkaloid hyoscyamia was brought to our attention, and, this in its two forms, the crystalline and amorphous has hardly taken its place in our materia medica, before its claims are disputed by the new alkaloid hyoscine. Of this there are two chemical combinations, the hydrobromate and the hydriodate. So far

as I am aware, Prof. H. C. Wood was the first in this country to call attention to this preparation, in an article in the January number of the *Therapeutic Gazette*, of which he recently became the editor. Aside from a mere mention of the hydriodate, he gave his attention to the hydrobromate. This is a white crystalline substance, resembling in external appearance the other alkaloids, but unlike them all is tasteless. It is readily dissolved in water, and a solution of 1 gr. to a thousand minims, or the $\frac{1}{1000}$ of a gr. to each 10 minims, is a prescription which admits of easy division for a dose, for administration hypodermically or by the stomach. It is manufactured by Merck, and can be readily obtained at a cost of 75 cents per grain.

Ten minims or the $\frac{1}{100}$ of a grain constitutes a good commencing dose. In testing the drug, the first experiment was made upon myself. I took the $\frac{1}{50}$ of a gr. by the mouth at 8.45 in the evening. My pulse was then 80, and tracing No. 1 was then taken. Tracing marked No. 2 was taken at 9.00 P. M.; pulse



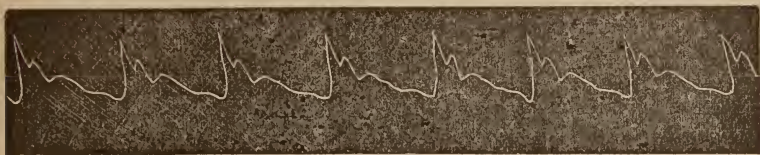
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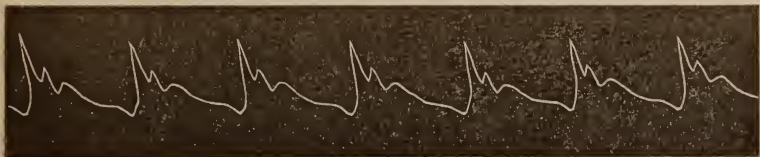
[No. 2.]

was 70 and pupils were widely dilated, face was flushed and there was a sensation of increased temperature. At 9.30 pulse was 70, and tracing No. 3 was taken; between 9.30 and 9.45 throat was dry, vision disturbed

and I yielded to sleep. At 9.45 was awakened, pulse 68, and tracing No. 4 was taken. At 10 pulse still 68,



[No. 3.]



[No. 4.]

same disturbance of sensation and vision, and drowsiness continued. At 10.30 pulse was 64, and tracing No. 5 was taken. Sleep was then irresistible. I dis-

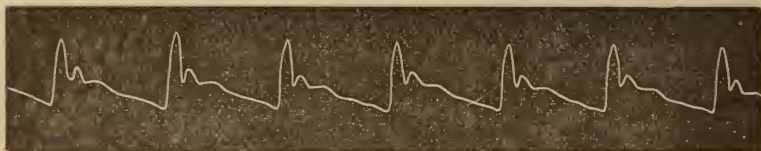


[No. 5.]

missed the person who was assisting me, and prepared to go to bed. I was very dizzy, movements were with difficulty performed and gait staggering. With considerable exertion I succeeded in removing my clothing and got into bed. During this period and the time before consciousness was lost, I suffered with extreme dryness and a sensation of burning in the fauces. Profound sleep followed and continued till 7 o'clock in the morning. I awoke feeling perfectly natural, and without any discomfort.

The next test was made upon an attendant who took the $\frac{1}{16}$ of a grain, at 8.30 P. M. pulse 82,

and tracing No. 1 was taken. At 9 pulse 66, and tracing No. 2 was taken. At 9.45 pulse was 60, and tracing No. 3 was taken. Pupils were widely dilated,



[No. 1.]

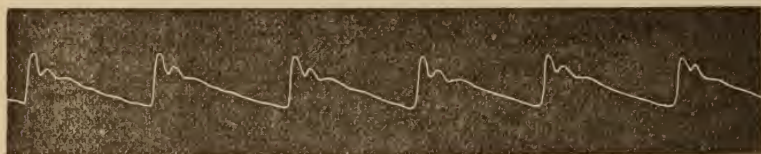


[No. 2.]



[No. 3.]

throat was dry and he was sleepy. At 10.30 pulse was 58, and tracing No. 4 was taken, after which he retired



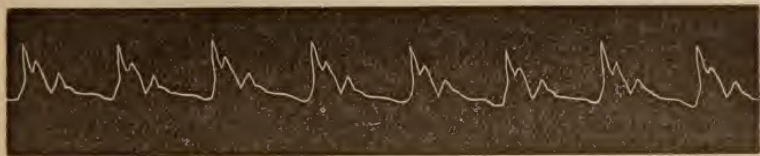
[No. 4.]

without inconvenience, and slept well. There were no unpleasant after results.

The next test was made upon a patient with the σ . At 9.45 A. M., pulse was 72. At 10.15, at 62, and pupils widely dilated. At 11 pulse was 51. No other effect was noted, and he was not sleepy.

The fourth test was made, also upon a patient; a large man, 6 feet 4 inches high, and weighing 250 lbs;

$\frac{1}{80}$ gr. was given, at 1.30 p. m. pulse 76, tracing No. 1

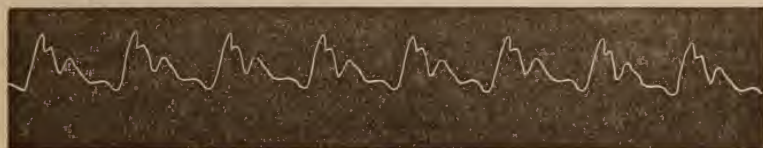


[No. 1.]

was taken. At 2 p. m. pulse 70; at 2.30, 68; and tracing No. 2 was taken. At 3 o'clock pulse 66, tracing No. 3 was taken. Pupils were slightly dilated, but no other effect noted.



[No. 2.]



[No. 3.]

From these experiments we draw the conclusion that hyoscine has a marked effect upon the circulation in reducing the frequency of the pulse. When $\frac{1}{80}$ of a gr. was taken, from 80 to 64 beats, a fall of 14 beats, and in another, under the $\frac{1}{80}$ gr. from 82 to 58 beats, a fall of 24 beats. This decrease was uniformly present in all of the experiments. There was little change, however, in the character of the pulse, save that which was due to the decrease in the number. There was no nausea or disturbance of the stomach, no headache or other unpleasant effect. The only complaint was from dryness of the fauces and disturbance of vision, and these were experienced in the subsequent clinical use of the drug.

Prof. Wood summarizes his physiological experiments as follows:

The peculiar therapeutic value which the physiological study leads us to look for in hyoscine, arises from the union of decided hypnotic powers with a spinal sedative influence, and a very feeble depressant action on the circulation. The experiments so far indicate also freedom from disturbance of the secretions, and unpleasant after effect.

He reports the use of hyoscine clinically in nine cases. Six of marked insanity, two of delirium tremens, and one of hystero-epilepsy. The medicine was given mostly by hypodermic injection, in dose varying from $\frac{1}{100}$ to the $\frac{1}{60}$ of a gr., and with the usually favorable result of controlling the patients, and procuring sleep. In the February number of the *Gazette*, Dr. Wood gives the report of a number of cases recorded by Dr. Chas. P. Henry, Assistant Physician in charge of the male department of the Philadelphia Institute for the Insane. He administered the hyoscine in eight cases, three of which were of melancholia, two of acute mania, one of subacute, one of dementia and one of destructive idiocy. He gave it both hypodermically and by the mouth; the largest dose was $\frac{1}{48}$ of a gr., hypodermically. In some of the cases it was repeated on several occasions. He reports that one great advantage in its administration was the tastelessness of the medicine, and the minuteness of the dose, that it can be given with the food or the drink of the patient, and when these are refused, it can be injected beneath the skin perhaps more readily and with better results than morphia. As to the constitutional effect of the drug, no marked depression of the pulse rate was noticed except in one case, when the extremities became quite cold and the circulation feeble. In only three of the

cases was dilatation of the pupils noted. The temperatures were unaffected and no bad results of any kind were observed to follow the use of the drug. It would therefore appear to be as safe and trustworthy as it is efficacious and powerful.

This is a condensed statement of all that has fallen under our eye, upon this drug. It will be noticed that the conclusions regarding the effect upon the circulation, differ materially from our experience. We now present the cases in which we have employed hyoscine clinically.

Case No. 1.—A man with melancholia, who had been gloomy and depressed, but quiet and gentlemanly, suddenly became frenzied, and while in this state bit off a portion of the ear of a demented paralytic, who was sitting quietly on the ward. To control him morphia was given in full doses, but without effect, as he was disturbed through the night and out of bed and noisy. After three nights of sleeplessness and restlessness under the morphia, he was given $\frac{1}{10}$ gr. of hyoscine by the mouth. He was still noisy at night, and excited during the day. The second night the $\frac{1}{5}$ gr. was given at 7.30, and at 8 o'clock the patient was asleep, and so continued till midnight, and the rest of the night was quiet, and was more comfortable during the next day. On the third night he slept under same dose until 3 o'clock, and was free from disturbance in the day. After this he slept all night for several nights, when hyoscine $\frac{1}{5}$ was changed to hyoscyamia $\frac{1}{12}$ gr., with the same good effect.

Case No. 2.—Woman, case of paroxysmal mania, during periods of disturbance is talkative and restless, runs up and down the wards, singing and boisterous, and is sleepless at night. In this condition she was given $\frac{1}{5}$ of a grain twice a day. This controlled her admirably, but she complained of disturbance of vision

from dilatation of the pupil and of dryness of the throat. After four days a change was made to the $\frac{1}{100}$ gr. morning, noon and bedtime. This gave quiet and composure during the day, and sleep at night, and produced less unpleasant effects than the larger dose. After having been continued a number of days, it was stopped to test the effect. The patient immediately became disturbed and maniacal, was emotional, singing, shouting out of the windows, and boisterous in her conduct. The medicine was renewed with the former good effect.

Case No. 3.—Woman, epileptic, extremely nervous, restless, with great muscular tremor. There was marked emotional disturbance, as crying, laughing, accompanied by extraordinary facial movements. At times she was frenzied, noisy, screaming and violent. She was given $\frac{1}{100}$ gr., morning noon and at bedtime; but recognizing the physiological effect of the hyoscine in the disturbance of vision and the dryness of the throat, she at times refused it on this account. When it was taken, however, it overcame the muscular tremor of the face, gave mental calm and quiet, and sleep at night. It was continued for more than six weeks with good results.

Case No. 4.—Woman with melancholia, extremely depressed and suicidal, had been cut down by her husband the day before admission, while attempting to hang herself. At home she was restless and sleepless, a typical case of the disease. She was given $\frac{1}{10}$ gr. at bedtime. At 10 o'clock was visited by the physician and found to be sleeping soundly, and was so reported during the night by the night watch. The same effect followed the administration for two weeks, when she was able to sleep without medicine.

Case No. 5.—Woman, case of chronic mania with periods of great disturbance, caused by the delusion that men came into her at night to ravish her. The noise from her outcries was something unusual even in

the most maniacal wards of an asylum. All of the patients and attendants, not only upon her ward, but upon the wards above and beneath, were broken of their rest for a large part of the night. The changes were rung upon full doses of the ordinary hypnotics, both alone and in combination, but with unsatisfactory results. For a time she was controlled by allowing a light from the ward to shine through the transom of her room; this, however, soon failed, and she was as noisy as ever. This seemed a good case on which to try the effect of hyoscine, and she was given $\frac{1}{15}$ of a grain by the mouth, which controlled her fully, and gave sleep. After being used for two weeks, it was stopped for two nights, but the patient was again noisy. It was then resumed, and has now been used for more than a month with the same success reported above.

Case No. 6.—Woman, acutely maniacal and very feeble from loss of sleep and refusal of food. The first night after admission, took no medicine and slept none. The second night was given hyoscine $\frac{1}{100}$ gr. hypodermically, and slept all night. The medicine was then continued in doses from $\frac{1}{100}$ to $\frac{1}{15}$ gr., with varying results, at times giving two or three hours sleep, again a good night's rest, and again failing to give any sleep. Other hypnotics were tried without any result. After struggling along in this way for two weeks or more, the patient began to improve, and passed beyond the need of sleep-producing agents. We were obliged to treat several abscesses produced by the injections.

Case No. 7.—A woman with acute mania, with great physical exhaustion. She had been kept in jail for a week, during which time nothing was done for her, and she neither eat nor slept. She took food voluntarily after admission, and was given $\frac{1}{100}$ gr. subcutaneously; she went to sleep in fifteen minutes, and slept

from 9 P. M. till 3 A. M. This continued for three nights. She did not rally, though taking food and gaining sleep, but continued to fail and died from exhaustion.

Case No. 8.—A man with melancholia, had been in the asylum for some months. He was quiet and comfortable till Sunday, the 25th of April, when he suddenly became frenzied, insisting that he was to be killed, was screaming and rocking to and fro in his chair and entirely uncontrollable. Was given $\frac{1}{10}$ gr. by the mouth. In two hours he was quiet, and toward evening quite sleepy, and slept well all night. His frenzy continued and the hyoscine was given in $\frac{1}{10}$ gr. doses during the day, and $\frac{1}{50}$ gr. at night. It partially controlled the patient during the day and uniformly gave good sleep at night.

Case No. 9.—Woman with melancholia, restless and sleepless, given $\frac{1}{10}$ gr. at bedtime and slept all night. The same dose repeated in the morning produced deep sleep and so overcame the patient that she was unable to leave her bed. The dose was subsequently reduced to $\frac{1}{100}$ gr. in the daytime and $\frac{1}{50}$ at night. This was continued for a month with excellent results.

Case No. 10.—Woman with dementia, very feeble both mentally and physically. She did not respond to conversation or recognize those about her; was restless, getting out of bed, clinging to those who entered her room so that it was difficult to get away from her, and was sleepless. Hyoscine in $\frac{1}{100}$ gr. dose was given; the restlessness disappeared, and she slept all night. The control was gratifying and complete.

Case No. 11.—Woman with violent mania; noisy, restless and disturbed. She took hyoscine for some six weeks in increasing doses from the $\frac{1}{100}$ to the $\frac{1}{3}$ during the day, and to the $\frac{1}{40}$ during the night. The medicine but slightly controlled the maniacal disturbance in the day, but gave fair sleep at night.

Besides these cases, which we have given in more or less detail, we have administered it in nine more cases of women and two of men patients.

Of the nine, six were quiet, but restless patients, with mild melancholia. It was given in doses of from $\frac{1}{200}$ to $\frac{1}{100}$ of a grain, with the effect of controlling the restlessness and muscular agitation, and producing greater comfort. In one case of acute chorea it was combined with constitutional treatment of arsenic and cod liver oil, and exercised a marked control over the opisthotonos and violent muscular movements, and gave sleep at night. The acute symptoms lasted about two weeks, and in three weeks the disease had subsided. Of the two remaining cases among the women, one was of chronic melancholia, and the other one of acute mania. The remedy, however, was given very irregularly from the persistent refusal to taking anything. The results were unsatisfactory.

Of the two remaining cases among men, both were acutely maniacal. The medicine given in $\frac{1}{4}$ gr. doses was much more efficient in producing sleep at night than in controlling the violence during the day.

We report in all twenty-two cases in which hyoscine has been employed. Of these eleven are of melancholia six of acute mania, one of chronic and one of paroxysmal mania, one of mania with epilepsy, one of dementia and one of acute chorea.

The limits of the doses was from the $\frac{1}{200}$ to $\frac{1}{33}$ of a grain, in all of which I found it a perfectly safe remedy. It was given by the mouth in twenty of the cases, and in two by hypodermic injection, and in one of these it was followed by painful abscesses. This, I think, was due to the debilitated condition of the patient produced by specific disease.

The physiological effect of the drug was experienced in from fifteen minutes to two hours, but the average

time was less than one hour. The pupils were dilated in most of the cases, but the disturbance of vision and the dryness of the fauces, or the inhibition of muscular movements, was only complained of in the two cases mentioned, but in many of them there was such a degree of mental disturbance that the absence of complaint is of little value in arriving at a knowledge of the existence of these unpleasant effects. There was no nausea, and in the few cases, in which it was given sufficiently long to produce the results, there was no disturbance of the appetite with consequent loss of flesh, as is sometimes experienced in the continued use of hyoscyamia. There is also less disturbance of the vaso-motor system than is found in the use of that alkaloid. It would seem from the experiments that it is a powerful sedative to both the cerebral and spinal system, and from the success attending its use, and for the reasons stated above, it would seem justly entitled to a high position in the list of hypnotic remedies, and will, I think, surpass in favor the sister alkaloid of hyoscyamia.

The following letter was received from Dr. Henry M. Hurd, co-member of the Committee on New Remedies:

EASTERN MICHIGAN ASYLUM, PONTIAC, MICH.,

June 12th, 1885.

DEAR DR. ANDREWS:

Your letter of recent date was forwarded to me at San Francisco. I hoped when I wrote you to be able to present a few clinical data respecting several remedies which in my experience had proven serviceable in the treatment of insane conditions, but find upon my return home so great a pressure of work in connection with the erection of two new infirmaries or hospitals, it is impossible for me to carry out my original intention. In order however not to fail wholly in my duty as a member of the Committee on New Remedies, I have decided to give a hasty sketch of the peculiar properties of the California "loco," or "rattle weed." By these titles are known a variety of weeds belonging to the order Leguminosæ. The more common ones met

in California are botanically known as *astragalus crotalariae*, *astragalus lentiginosus* and *oxytropis lamberti*, and the poisonous properties of all seem about equal. These weeds are not unlike a lupine in general appearance. They have a large, fleshy, succulent stalk, and grow luxuriantly upon the plains and table-lands of California. The weed grows during nearly the entire year, and the plant flowers early and successive crops are produced. The flowers are in clusters and have a greenish-white or yellow hue, and the fruit is an inflated pod about the size of the dwarf pea. This pod, when pressed upon, bursts with a sound like a toy torpedo, and when ripe and dry it remains upon the stalk to rattle in the wind. Hence the name "rattle-weed." The Spanish word "loco" which means foolish or crazy, is applied to the plant because of its peculiar effect upon horses, cattle or sheep who feed upon it. Ranch-men and stock-growers state that no animal will eat of it unless driven to the step by great hunger. When all other herbage fails animals at first pasture upon it sparingly and merely to sustain life. After eating it for several days they begin to crave it, and soon prefer it to any other forage. It has been noticed that a horse who has become accustomed to eating loco will refuse all good food and wander for miles in search of the plant. It seems to produce a sort of intoxication at first, and afterwards hallucinations of vision. It is impossible to lead the horse through a gate or into a barn. He walks mincingly, magnifies the size of trifling objects in his path, shies without any cause, and becomes unmanageable. He seems apprehensive of danger, and can neither be coaxed nor driven. His gait becomes unsteady, and he is manifestly ataxic. He pays little attention to his driver. He stands with drooping head and seems indifferent. It is difficult to get him started and equally difficult to stop him. He becomes headstrong, indifferent to the bit, and extremely dangerous to drive. If driven into the water or near water, he rushes headlong into the stream, and often lies down and refuses to rise. He refuses all food except loco, and rapidly emaciating dies of exhaustion. There is often great cutaneous hyperæsthesia, especially in the region of the neck and about the face. If the horse is struck under the jaw, ever so lightly, with the flat of the hand, he struggles violently, and frequently throws himself backward upon his head. All power of reasoning is gone, and he seems utterly unable to control his morbid impulses. If the horse be removed from the plant at an early stage of his disorder, and starved into eating other food, the disease may be arrested, but complete

recovery is impossible. The horse is ruined. Cattle are affected in much the same way. They lose all ability to care for themselves, and wander about in a dazed, confused state, and die from exhaustion. They are frequently tormented by a persistent thirst, and instinctively seek water, which they lie down in. In many instances they drown in a few inches of water, because too indifferent or too stupid to make any effort to get out of it. Sheep also are similarly affected. They lie down and refuse to graze. If nutritious food is placed within reach no attention is paid to it. If food is placed in the mouth the animal masticates and swallows it, but makes no effort to procure any more.

Under the present system of fenced stock ranges in California animals suffer much less than formerly. When open ranges were common they frequently became overstocked during dry seasons, and when large numbers of cattle were compelled to eat every green thing a large proportion of them suffered from loco poisoning.

The effects of loco upon man have not been studied. The statement is made that sheep herders, who live far from vegetables, have been known to shell the peas from the pods and after cooking to eat them with impunity. It is very possible that if this were done frequently injurious effects would follow.

My object in this imperfect sketch of the effects of the plant is to bring it to the notice of the members of the Association, with the hope that some member will thoroughly investigate its physiological and therapeutic properties. It will be noticed that the effects described are due to the use of poisonous doses. It is possible that in physiological doses carefully administered it might prove curable to certain forms of insanity. It belongs to a large family of plants which has produced valuable remedies, like Jamaica Dogwood and Calabar Bean. It certainly deserves further study to ascertain its range of therapeutic utility—if it possesses any.

I procured a quantity of the plant when in California, with the intention of making an extract for experiments upon the lower animals, but it became damaged during the journey home and proved worthless for pharmaceutical purposes.

Regretting that I have been unable to do more to further the work of your committee, I remain,

Sincerely yours,

HENRY M. HURD.

THE CURABILITY OF INSANITY.

A STATISTICAL STUDY.*

BY PLINY EARLE, M. D.,

Superintendent of the State Lunatic Hospital at Northampton, Mass.

Notwithstanding the manifold triumphs of medicine, of surgery, and of other sciences and arts, there are inexorable limits to their achievements and their power of achievement. Nature yields in a measurable extent to the conceptions, the devices, the ministrations, and the administrations of human skill, but, as if to mock them in the end, and to demonstrate the retention of her inherent supremacy, she at length establishes a position and defies their power. These are trite truths, so trite, indeed, that the mention of them is an apparent superfluity: and yet they answer my purpose as an introduction, and are not wholly inappropriate at the beginning of a paper in which their truthfulness receives another illustration.

Nowhere are these truths more conspicuous, than in the sphere of the enterprises to overcome the disabilities of what are termed the defective classes of mankind—defective from imperfections either congenital or acquired. It is, indeed, perhaps true that, in the treatment of the blind, in the attempt to obtain a substitute for the eye and thus open an avenue of perception to the imprisoned brain, although nothing has been discovered which is, by very far, a full equivalent of the perfect natural organ, the success has equalled the expectation. But in reference to some of

* Read before the Association of Medical Superintendents of American Institutions for the Insane, on retiring from office as its President, at Saratoga, N. Y., June 16, 1885.

the other classes this is not true; and the hopes and confident anticipations awakened in the public mind, in the comparatively early periods of the modern endeavors at improvement, have been doomed to at least a partial disappointment.

Some forty years ago, when the efforts of Dr. Guggenbühl, in Switzerland, to elevate the idiot from his congenital degradation had been imitated in other parts of Europe, the world of philanthropy and the world of thought were startled by the announcement of a certain degree of success; and this, in the minds of the people, was magnified to such an extent as to give the general impression, that idiocy is so far amenable to culture that the great mass of its subjects can be raised nearly to a level with the average of the race. But, after the experience of a sufficient number of years to furnish a reliable test, it is found that, although partial imbeciles are susceptible of a degree of elevation in a ratio inverse to the degree of mental defection, and although, with the inclusion of the idiot, the advantages acquired are more than sufficient to vindicate the enterprise, yet the congenital idiot is essentially the congenital idiot still.

The history of the instruction of deaf mutes in vocal language is similar, in these respects, to that of the attempts to redeem the idiot from his infirmity. Surprising results were attained in some instances, and public opinion, taking its shape and tone from these, leaped to the conclusion that, although deafness might continue, permanent mutism was soon to become a thing of the past. Experience has not yet shown that a majority of deaf-mutes are susceptible of satisfactory instruction and achievement in this method of intercommunication.

A similar exaltation of belief and of expectation has

occurred in the specialty in which we are engaged; and, unfortunately, a similar disappointment has awaited all who had become interested in the subject, whether in the profession or among the people at large.

It is proposed, in this paper, to show, by the collocation of statistics, the actual results of treatment at a large number of institutions, both foreign and domestic, bringing our knowledge of such general results to a later date than that contained in any former statistical essay.

RECOVERIES AT BRITISH ASYLUMS.

It will be remembered that the reports of many, if not most, of the British asylums, contain a table, originally designed by Dr. Thurnam, in which the admissions, discharges, recoveries and deaths of patients are classified according to the duration of the insanity.

These classes are as follows:—

1st. First attack, and within three months, on admission.

2d. First attack, above three and within twelve months, on admission.

3d. Not first attack, and within twelve months, on admission.

4th. First attack or not, but of more than twelve months, on admission.

5th. Congenital and unknown.

This is a well conceived and useful table for its intended purpose; and, if prepared with sufficient care and discrimination, can not well fail to throw light upon the question of curability as affected by duration, or by the fact of first or subsequent attack.

Nearly two years ago I collated the statistics of this table in a series of the annual reports of twenty-three

of the British asylums, so far as relates to all cases of less duration than twelve months at the time of admission. For more than fifty years, all such cases have, in the United States, been called *recent*, in contradistinction to those of remoter origin, which have been called *chronic*; and my object in collecting the statistics was to ascertain the degree of curability to which those asylums had attained in the treatment of what we call recent cases.

Of each of twelve of the asylums these statistics, which are embodied in Table I, extend over a series of six consecutive years, the last of which was, in some instances, 1882, and in others, 1883. At three of the asylums they extend over five years; at one, over four years; and at seven, over three years. At each asylum the years are consecutive; and at no one is the last of the series later than 1878, the majority being either 1880, 1881, or 1882.

The results of these statistics may be briefly stated.

1st Class, (First Attack, less than 3 months duration) the admissions were 8,316; recoveries, 4,051; per cent of recoveries, 48.71.

2d Class, (First Attack, 3 to 12 months' duration) admissions, 2,613; recoveries, 764; per cent of recoveries, 29.24.

3d Class (Not first Attack, less than 12 months' duration) admissions, 4,768; recoveries, 2,640; per cent of recoveries, 55.37.

By uniting the first two classes, we have all cases of first attack and of less duration than one year. Of these, the admissions were 10,929; the recoveries, 4,815; and the proportion of recoveries, 44.06 per cent.

Of the third class the admissions were 4,768; the recoveries, 2,640; and the proportion of recoveries, 55.37 per cent. Here we have another illustration of the fact that recovery takes place in a less proportion of

TABLE I. CASES OF LESS THAN TWELVE MONTHS, AT TWENTY-THREE BRITISH ASYLUMS.

ASYLUMS.	Years inclusive.	CASES OF FIRST ATTACK, WITH DURATION.										NOT FIRST ATTACK.	
		Under Three Months.			Three to Twelve Months.			Total Under Twelve Months.			Not over Twelve Months.		
		Adm.	Recov'd.	Per ct. of recover's	Adm.	Re- cov'd.	Per ct. of recover's	Adm.	Recov'd.	Per ct. of recover's	Adm.	Recov'd.	Per ct. of recover's
Somerset and Bath.....	1877-82	499	189	37.88	166	80	48.19	665	269	40.45	520	148	46.25
Devizes	1877-82	289	120	41.52	109	20	18.35	398	140	35.18	198	80	40.40
Abergavenny.....	1877-82	285	141	49.47	102	24	23.53	387	165	42.64	167	101	60.48
Carmarthen.....	1877-82	108	57	52.78	50	16	32.00	158	73	46.20	79	37	46.84
Derby County.....	1877-82	397	180	45.34	112	41	36.61	509	221	43.42	225	128	56.89
Hereford.....	1878-83	121	66	54.55	62	23	37.10	183	89	48.63	108	56	51.85
South Yorkshire.....	1877-82	1,251	565	45.16	214	55	25.70	1,465	620	42.32	693	335	48.34
Prestwich	1877-82	1,203	671	55.78	243	63	25.93	1,446	734	50.76	541	319	58.96
Lancaster	1877-82	654	393	60.09	344	90	26.16	998	483	48.40	444	309	69.59
Warwick County.....	1878-83	228	124	54.39	116	31	26.72	344	155	45.06	111	63	56.76
Edinburgh Roy.	1878-83	755	381	50.46	298	98	32.89	1,053	479	45.49	673	381	56.61
Belfast	1877-82	444	234	52.70	147	49	33.33	591	283	47.83	112	74	66.07
Retreat, York.....	1876-80	40	20	50.00	21	9	42.86	61	29	47.54	36	13	36.11
Gartnavel	1875-79	541	227	41.96	126	22	17.46	667	249	37.33	235	108	45.96
Cambridge and Ely.....	1877-81	213	85	39.90	58	9	15.51	271	94	34.69	76	40	52.63
Barming Heath.....	1877-80	553	259	46.84	183	54	29.50	736	313	42.53	302	195	64.57
City of London.....	1880-82	62	27	43.55	28	10	35.71	90	37	41.11	44	28	63.64
Berrywood	1878-80	181	71	39.23	58	28	48.28	239	99	41.42	102	39	38.23
Worcester.....	1879-81	169	81	47.93	73	15	20.55	242	96	39.67	113	82	72.57
Nottingham	1877-79	119	54	45.38	31	12	38.71	150	66	44.00	44	19	43.18
Beverly	1876-78	87	44	50.57	23	2	8.69	110	46	41.82	42	20	47.62
Crichton	1877-79	47	25	53.19	14	4	28.57	61	29	47.54	30	21	70.00
Southern Counties.....	1877-79	70	37	52.86	35	9	25.71	105	46	43.81	73	44	60.27
Totals.....		8,316	4,051	48.71	2,613	764		10,929	4,815		4,768	2,640	
Mean or Average per cent...							29.24			44.06			55.37
Aggregate													47.49
of admissions 15,697; of recoveries 7,455.													

of admissions 15,697; of recoveries 7,455.

cases of first attack than in cases subsequent to the first—a fact which was demonstrated in an article on curability in the report for 1880 of the Northampton Lunatic Hospital.

By a union of the three classes, all of which contain, exclusively, cases of less than twelve months in duration, and are consequently here known as recent cases, we obtain the subjoined results.

Admissions, 15,697; recoveries, 7,455; proportion of recoveries, 47.49 per cent.

Among this series of twenty-three asylums is the Retreat at York, the statistics of recoveries at which, from 1796 to 1819, have been quoted, ever since they were published, as one of the authorities for the eminent curability of mental disorders. It may not be uninteresting to bring into juxtaposition those statistics of three-fourths of a century ago, and those of the same institution for the five years from 1876 to 1880 inclusive. This is done in the following table.

TABLE II. PER CENT OF RECOVERIES AT THE YORK RETREAT OF CASES OF LESS DURATION THAN TWELVE MONTHS.

	Per Cent of 1ST CLASS.	Per Cent of 2D CLASS.	Per Cent of 3D CLASS.	Per Cent of TOTAL.
1796—1819	85.10	55.55	61.76	68.25
1876—1880	50.00	42.86	36.11	43.30
Decrease of per cent,	35.10	12.69	25.65	24.95

The diminution of the proportion of recoveries on the admissions is, for the 1st class, 35.10 per cent on the admissions; for the second class, 12.69 per cent; for the third class, 25.65 per cent; and for the whole, 24.95 per cent, or, in round numbers, one-fourth of the admissions.

The proportion of diminution from the actual recoveries of the first period, is, for the first class, 41.17

per cent, or a fraction more than two-fifths; for the second class, 22.84 per cent, or a fraction more than one-fifth; for the third class, 41.53 per cent, or a fraction over two-fifths; and for the whole, 36.25 per cent. In other words, for each hundred of recoveries of what we call recent cases, three-fourths of a century ago, there are but sixty-four (63.75) recoveries now.

Some months after the collection of the foregoing statistics, but before any use had been made of them, Dr. T. A. Chapman, of the Hereford Asylum, England, published a similar but much larger collection, in *The Journal of Mental Science* for July, 1884. It contains the statistics of "46 English County and Borough Asylums, and the Edinburgh and Glasgow Royal Asylums, for (in most instances) 11 years, 1872 to 1882 inclusive." Here is a collocation of the remarkable number of 93,443 cases of insanity, all of them classified as in the foregoing table. The whole number of recoveries was 35,468, or 37.95 per cent of the admissions. But as the recoveries of *recent* cases are now, alone, under consideration, we will turn our attention especially to them. The subjoined table shows the numbers, and the percentage, in each of the first three of Thurnam's classes.

Dr. Chapman's table includes, apparently, twenty-eight Asylums that are not in mine, and mine has five that are not in his. Of these five, two are in Scotland and three in England, the Retreat at York being one.

In regarding these two tables, so much alike and yet so different, almost the first impression received from them is the striking similarity of results. These are, indeed, so nearly identical as to justify one's faith in the sometime possibility of a close approximation to accuracy in this branch of vital statistics. The difference in the proportion of recoveries, as indicated

by the two, are, for the first class of cases, only one-one-hundredth (.01) of one per cent; for the second class, one and three-hundredths (1.03) per cent; for the third class, one and seventy-six-hundredths (1.76) per cent; and for the total, ninety-seven-hundredths (.97) of one per cent.

TABLE III. RECOVERIES OF CASES OF LESS DURATION THAN ONE YEAR.

CLASSES.	Admissions.	Recoveries.	Per Cent of Recoveries.
CLASS I.			
1st attack; less than 3 months' duration,	38,283	18,654	48.72
CLASS II.			
1st attack; 3 to 12 months' duration,	12,126	3,421	28.21
CLASS III.			
Not 1st attack; less than 12 months' duration,	19,574	10,494	53.61
Total,	69,983	32,569	46.52

When Dr. Woodward, in 1833, took charge of the Worcester Hospital, he had before him, as exemplars, three well known pioneers in the field of high percentages of recoveries. Dr. Burrows, in 1820, had reported 91.32 per cent as the result of the treatment of 242 cases, of which 221 recovered. He also published the results, from 1797 to 1819, at the York Retreat, where, of 47 cases of less duration than three months, the recoveries were 40, or an equivalent of 85.10 per cent.* In 1827 Dr. Todd, at the Hartford Retreat, reported that, of 23 recent cases admitted 21 had recovered, a proportion of 91.3 per cent. In 1841,

* The fact should not be overlooked that, if the word *recent* be used in its American signification, applying to all cases of less duration than one year, the proportion of recoveries at the Retreat was only 68.25 per cent, the admissions being 126, and the recoveries 86.

Dr. Woodward obtained his highest proportion of recoveries, 91.42 per cent, by the treatment of 70 cases, 64 of which recovered; and in 1842, Dr. Galt, at the Williamsburg, Virginia, Asylum, excelled all of his predecessors in the announcement that of thirteen recent cases under his care twelve had recovered, a percentage of 92.3.

Here we have five different, well-known medical authorities, each confirmatory and corroborative of the others, and all of which have, for an average of half a century, been regarded as a kind of oracular proclaimers of the possible achievement of recovery in about 90 per cent of recent cases. Yet, singularly enough, the whole of the five separate reputations were built, and the oracles established, upon the treatment of an aggregate of only 395 cases.

On the other hand we have before us, in Dr. Chapman's table, the results of treatment of a number of recent cases which lacks but seventeen to make it seventy thousand, and the recoveries are only 32,569, or 46.52 per cent. This ratio of curability is only 86 hundredths of one per cent more than half as large as that which was claimed by Dr. Burrows, and only 37 hundredths of one per cent less than one-half as large as that of Dr. Galt. Even in the cases of first attack and of only three months' duration, of which there were 38,283, the recoveries were but 18,654, or 48.72 per cent. In the light thrown upon the subject by this unparalleled collection of recent cases, what becomes of the once exceedingly fashionable assertion that "from seventy-five to ninety per cent can be cured?"

RECOVERIES AT THIRTY-NINE (15+24) AMERICAN INSTITUTIONS.

Inasmuch as neither Thurnam's table nor its equivalent in any other form is used at the American

institutions, it is impossible to group, or analyze the results at the latter on precisely the same basis, in all respects. Nevertheless, upon looking over the American reports, I find that a large amount of matter may be brought together, illustrative of the proportion of the reported recoveries of recent cases.

In the statistics of a majority of our hospitals, although, in reference to admissions, the duration of the insanity is given, and hence a distinction between recent and chronic cases rendered possible, yet no such discrimination is made in regard to patients discharged. The subjoined table contains the results, in regard to recovery, for a series of from two to six years, of fifteen American hospitals, in the reports of which the recoveries of cases of less than twelve months' duration are numerically given. The time during which each hospital furnished these statistical results was at Elgin, six years; at Concord, Worcester, Taunton, Utica, Harrisburg, Dixmont, Dayton, and Ossawatimie, five years each; at McLean, Northampton, Danvers, and Columbia, S. C., four years each; and at Boston, and Winnebago, three years each; the period ending, in most cases, in 1883.

The aggregate of the admissions of *all cases* is 14,562; the aggregate recoveries, 3,780; and the proportion of recoveries, 25.96 per cent. The largest proportion was 35 per cent, at Dayton; and the smallest, 18.58 per cent, at Harrisburg. At five others it was less than 23 per cent, and at still five others less than 30 per cent; while at three besides Dayton, it was over 30 per cent.

The aggregate of admissions of *recent cases*, is 8,063; that of recoveries of recent cases, 3,112; and the proportion of recoveries of recent cases, 38.59 per cent. The largest proportion is 46.95 per cent, at Dayton;

and the smallest, 26.96 per cent, at Columbia, S. C. Of the thirteen others, the proportion at one was less than 30 per cent; at two, between 30 and 35 per cent; at five, between 35 and 40 per cent; and at five between 40 and 45 per cent.

TABLE IV. WHOLE NUMBER OF RECOVERIES, AND RECOVERIES OF CASES OF LESS THAN TWELVE MONTHS' DURATION, AT FIFTEEN AMERICAN INSTITUTIONS.

ASYLUMS.	Y'rs.	ADMISSIONS.		DISCHARGED RECOVERIES.				
		Under 12 mos.	Whole number.	Under 12 mos.	Per ct. of recent cases.	Whole number	Per cent of whole number.	Per ct. of all recoveries on rec't admissions
Elgin	6	488	1,017	197	40.37	246	24.19	50.41
Concord	5	334	536	148	44.31	161	30.04	48.20
Worcester	5	593	1,254	191	32.21	254	20.26	42.83
Taunton	5	824	1,619	300	36.41	369	22.79	44.78
Utica	5	1,518	2,184	661	43.54	716	32.78	47.17
Harrisburg	5	395	716	117	29.62	133	18.58	33.67
Dixmont	5	646	1,117	238	36.84	288	25.78	44.58
Dayton	5	607	977	285	46.95	342	35.00	56.34
Ossawatimie	5	398	707	165	41.46	217	30.69	54.52
McLean	4	207	308	81	39.13	89	28.90	42.99
Northampton	4	224	511	75	33.48	104	20.35	46.43
Danvers	4	962	2,078	361	37.53	458	22.04	47.61
Columbia, S. C. ...	4	408	702	110	26.96	161	22.93	39.46
Boston	3	174	275	66	37.93	80	29.09	45.98
Winnebago	3	285	561	117	41.05	162	28.88	56.84
Totals, and Mean per cent	68	8,063	14,562	3,112	38.59	3,780	25.96	46.88

Finding that, in despite of the traditional "75 to 90 per cent" of some of the fathers, not one of these hospitals discharged even 47 per cent of recoveries of recent cases, while the mean, or average of all of them was less than 39 per cent, I studied the relation between the *whole number of recoveries* and the number of *admissions of recent cases*. The whole number of recoveries is larger by 668 than the recoveries of recent cases; and the number of admissions of recent cases is 6,499 smaller than the whole number of admissions. Yet, strange as it may appear, the total of recoveries is only 46.88 per cent of the admissions of recent cases! The largest proportion, 56.84 per cent, is at Winnebago;

and the least, 33.67 per cent, at Harrisburgh. Of the remaining thirteen hospitals, the proportion is less than 40 per cent at one; between 40 and 45 per cent, at four; between 45 and 50 per cent, at five; between 50 and 55 per cent, at two; and over 55 (56.34) per cent, at one. Thus, after aiding and assisting the recoveries of recent cases by a supplementary and a complimentary gift of the certainly not despicable number of 668 cases, we have been unable to swell them even to 50 per cent of the admissions of recent cases.

We now come to the hospitals which give the duration of the disease in the cases admitted, but give no such information in respect to the cases discharged. The following table includes the statistics, for a term of from two to six years each, of twenty-four institutions of this class. Of six of them—Jacksonville, Ill., Mt. Pleasant, Iowa, Fulton, Mo., St. Joseph, Mo., Lincoln, Neb., and Jackson, La.—the term was six years; of eleven—Hartford Retreat, Ct., Middletown, Ct., Middletown, N. Y., Trenton, N. J., Danville, Pa., Williamsburg, Va., Richmond, Va., U. S. Government Hospital, Washington, D. C., Jackson, Miss., Cleveland, Ohio, and Longview, Ohio,—five years; of six—Brattleboro, Vt., Staunton, Va., Weston, W. Va., Pontiac, Mich., Madison, Wis., and St. Peter, Minn.,—four years; and at one—Augusta, Me.,—three years.

The total of admissions is 18,756; the total of recoveries, 5,933; and the proportion of all recoveries on all admissions, 31.63 per cent. The largest percentage of recoveries 48.54, was at Fulton, Mo., and the smallest, 15.83, at Danville, Pa. Of the remaining 22 institutions, the proportion was less than 23 per cent, at four; from 25 to 30 per cent, at five; from 30 to 35 per cent, at five; from 35 to 40 per cent, at three; from 40 to 45 per cent, at three; and from 45 to 46 per cent, at two.

TABLE V. RECOVERIES AT TWENTY-FOUR AMERICAN INSTITUTIONS.

ADMISSIONS.				DISCHARGES.		
HOSPITALS.	Years.	Under 12 months' duration.	Total Admissions.	Total Recoveries.	Per cent of recoveries on all Admissions	Per cent of all recoveries on admissions of less than 12 months' duration.
Jacksonville, Ill.,....	6	1,000	1,605	440	27.41	44.00
Mt. Pleasant, Iowa,..	6	852	1,548	400	25.84	46.95
Fulton, Mo.,.....	6	675	1,162	564	48.54	83.56
St. Joseph, Mo.,.....	6	435	740	257	34.73	59.08
Lincoln, Neb.,.....	6	414	654	267	40.83	64.49
Jackson, La.,.....	6	83	231	63	27.27	75.90
Hartford Retreat,....	5	300	434	150	24.56	50.00
Middletown, Ct.,...	5	492	1,168	241	20.63	48.98
Middletown, N. Y.,..	5	503	775	300	38.71	59.64
Trenton, N. J.,.....	5	373	786	244	31.04	65.42
Danville, Pa.,.....	5	263	695	110	15.83	41.83
Williamsburg, Va.,..	5	165	380	171	45.00	104.00
Richmond, Va.,.....	5	357	559	254	45.44	71.15
U. S. Gov't Hospital,	5	549	1,099	357	32.48	65.03
Jackson, Miss.,.....	5	235	526	228	43.35	97.02
Cleveland, O.,.....	5	681	1,135	414	36.48	60.79
Longview, O.,.....	5	470	882	325	36.85	69.15
Brattleboro, Vt.,....	4	199	344	88	25.58	44.22
Stanton, Va.,.....	4	207	467	201	43.04	97.10
Weston, W. Va.,....	4	136	328	104	31.71	76.47
Pontiac, Mich.,.....	4	320	707	145	20.51	45.31
Madison, Wis.,.....	4	307	746	163	21.85	53.09
St. Peter, Minn.,....	4	486	1,168	267	22.86	54.94
Augusta, Me.,.....	3	358	617	180	29.17	50.28
Totals,.....	118	9,860	18,756	5,933	31.63	60.17

The whole number of *recent cases* admitted was 9,860; the whole number of recoveries, as before stated, 5,933; and the percentage of *all recoveries* upon the number of *recent cases* admitted, 60.17. Here, then, by setting aside and disregarding the 8,896 cases of more than 12 months' duration, we have succeeded in raising the recoveries to a point above 50 per cent.

By the union into one group, so far as they are susceptible of such union, of the contents of these two tables, we obtain the following aggregate results.

In 39 American hospitals, during a period of from 3 to 6 years each, making an aggregate of 186 years of hospital work, the number of patients admitted was

33,318; the number of patients discharged recovered, 9,713; and the proportion of recoveries, as compared with admissions, 29.15 per cent. In the factors producing this result it will be observed that all the cases of duplicate, triplicate and manifold recoveries of one and the same person, are included, and yet the recoveries do not rise to 30 per cent.

The whole number of *recent* cases admitted was 17,923; the total recoveries of both recent and chronic cases, as already mentioned, 9,713; and the proportion of *all recoveries*, as compared with the admissions of *recent cases*, 54.19 per cent. But be it not forgotten that this result is obtained by the sacrifice, or annulment, of *fifteen thousand three hundred and ninety-five (15,395) admissions*, or, in other words, by calculating the proportion of recoveries upon a little more than one-half of the number of admissions.

RECOVERIES AT TWENTY AMERICAN HOSPITALS; THIRD
TERM OF FIVE YEARS.

It will, perhaps, be remembered that my monograph on the Curability of Insanity, which was prepared in 1876, contained a list of twenty institutions for the insane, so tabulated with their statistics as to show the proportion of recoveries at each of two quinquennial periods,—the first of those periods being the second quinquennium of the existence of those hospitals, respectively, and the last period being the quinquennium terminating in either 1876, or one of the two immediately preceding years. The longest time wholly intervening between those two quinquennia was 44 years, at the McLean Asylum, Mass; the shortest, 2 years, at the Mendota Hospital, Wisconsin; and the mean or average time, eighteen and one-half years. But the true mean time, as applied to the gathering of

the statistics—that is, the time from the middle of the first quinquennium to the middle of the last—was five years longer, or twenty-three and one-half years.

The total of admissions in the first period was 14,516; the total recoveries, 6,689; and the proportion of recoveries on admissions, 46.08 per cent. The admissions of the second period were 24,383; the recoveries, 8,354; and the proportion of recoveries, 34.26 per cent, or a fall of 11.82 in that proportion. This diminution equalled one fourth, or, to be exact, 25.66 per cent, of the recoveries of the first period.

As eight years have elapsed since the close of the second period, it has appeared to me that some similar researches, at a still later date, might tend more fully to illustrate the subject of curability, and perhaps secondarily, or indirectly, the general character of the disease. Accordingly, I have collected the statistics of admissions and recoveries at the same twenty institutions during a third period of five years, that period terminating, at nineteen of them, in or with 1884, and at one where the reports are biennial, in or with 1883. At two of the institutions, both of which issue biennial reports, the duration of the period is six years. Those statistics, together with the results in each of the first two periods, are contained in Table VI.

The aggregate admissions in the course of this third period is 23,052; the aggregate recoveries, 6,896; and the proportion of recoveries, 29.91 per cent of the admissions, a result which demonstrates that the reported recoveries have continued to diminish, during the last eight years, in very nearly the same annual ratio as they had diminished between the first and the second period.

The following is a summary of the results of the whole investigation—

TABLE VI.
RECOVERIES AT TWENTY AMERICAN HOSPITALS; THIRD TERM OF FIVE YEARS.

INSTITUTIONS.	First Five Years.	Per cent of Recov's.	Second Five Years.	Per cent of Recov's.	Decrease of per cent of Recov's.	Third Five Years.	Total Admitted.	Total Recov'd.	Per cent of Recov's.	Per cent of Recoveries compared with that of Second Five Years.		Decrease of per cent of recover's from first five years.
										Decr'se.	Incr'se.	
Augusta, Me.,	1846-50	48.55	1871-75	36.62	11.93	1880-84	1,008	296	29.36	7.26		19.19
Concord, N. H.,	1848-52	46.92	1872-76	32.97	13.95	1880-84	623	158	25.36	7.61		21.56
Brattleboro, Vt.,	1841-46	43.50	1871-76	30.43	13.07	1873-83	551	124	22.50	7.93		21.00
McLean, Mass.,	1823-27	40.69	1871-75	21.66	19.03	1880-84	421	123	29.22		7.56	11.47
Worcester, Mass.,	1839-43	48.59	1871-75	29.75	18.84	1880-84	1,319	264	20.01	9.74		28.58
Taunton, Mass.,	1859-63	43.46	1871-75	23.11	20.35	1880-84	1,318	296	22.46	.65		21.00
Butler Hospital,	1854-58	39.78	1872-76	35.57	4.21	1880-84	635	194	30.55	5.02		9.23
Hartford Retreat,	1829-33	57.40	1870-74	39.21	18.19	1880-84	453	162	35.76	3.45		21.64
Bloomington, N. Y.,	1826-30	47.55	1871-75	32.53	15.00	1880-84	626	200	31.95	.60		15.60
Utica, N. Y.,	1848-52	43.17	1871-75	32.83	10.84	1880-84	2,020	610	30.20	2.13		12.97
Flatbush, N. Y.,	1861-65	41.88	1871-75	33.11	8.77	1880-84	2,071	336	16.22	16.89		25.66
Trenton, N. J.,	1853-57	42.79	1872-76	31.32	11.47	1880-84	836	251	30.02	1.30		12.77
Pennsylvania Hospital, ..	1846-50	51.10	1871-75	42.30	8.80	1880-84	973	328	33.71	8.59		17.39
Dixmont, Pa.,	1861-65	37.78	1871-75	30.01	7.77	1880-84	968	216	22.31	7.70		15.47
Catonsville, Md.,	1839-43	51.59	1871-75	40.83	10.76	1880-84	656	209	31.86	8.97	8.24	19.73
Newburgh, O.,	1860-64	46.63	1871-75	30.03	16.60	1880-84	1,147	439	38.27			8.36
Dayton, O.,	1860-64	60.16	1870-74	45.25	14.91	1880-84	910	337	37.03	8.22		23.13
Indianapolis, Ind.,	1853-57	57.26	1871-76	52.48	4.78	1880-84	4,010	1,678	41.84	10.64		15.42
Jacksonville, Ill.,	1855-60	46.53	1869-74	31.96	14.57	1879-84	1,486	395	26.58	5.38		19.95
Mendota, Wis.,	1865-69	33.82	1871-75	25.86	7.96	1880-84	1,021	280	27.42		1.56	6.40
Totals and mean per cent.		46.08		34.26	11.82		23,052	6,896	29.91	4.35		16.17

Recoveries in the 1st period, 46.08 per cent of the admissions.

Recoveries in the 2d period, 34.26 per cent of the admissions.

Recoveries in the 3d period, 29.91 per cent of the admissions.

Decrease of recoveries from 1st to 2d periods, 11.82 per cent of the admissions.

Decrease of recoveries from 2d to 3d period, 4.35 per cent of the admissions.

Total decrease of recoveries from 1st to 3d period, 16.17 per cent of the admissions.

The decrease of recoveries from 1st to 2d period, is 25.66 per cent of the recoveries of the first period.

The decrease of recoveries from 2d to 3d period, is 12.69 per cent of the recoveries of the second period.

The total decrease from the recoveries of the first period is equal to 35.09 per cent of the recoveries of the first period.

The numbers of the insane subjected to treatment being hypothetically the same at the three periods, then, for each hundred (100) that recovered in the first period only seventy-four (74.34) recovered in the second period, and only sixty-five (64.91) recover now.

The proportion of recoveries between the last two periods, from 1879 to 1884, did not diminish at all of the twenty institutions. At three of them it increased. At the McLean Asylum this increase was 7.56 per cent of the admissions; at the Newburg, Ohio, hospital, it was 8.24 per cent; and at the Mendota, Wisconsin, hospital, 1.56 per cent. But notwithstanding this augmentation, the actual decrease from the proportion recovered in the first period, at those three institutions, is still 11.47, 8.36, and 6.40 per cent, respectively.

The decrease from the second to the third period,

and the total decrease from the first to the third period, at each of the seventeen other institutions, may be learned from the last two columns of the table. The decrease is more than one-half at the Worcester and the Flatbush hospitals; very nearly one-half at Brattleboro and Taunton; and more than one-third at Augusta, Concord, Hartford, Pennsylvania Hospital, Dixmont, Catonsville, Dayton and Jacksonville.

STATISTICS OF ONE YEAR, AT FIFTY-EIGHT AMERICAN
INSTITUTIONS.

For the purpose of ascertaining the extent to which the results of one year of the current work at American institutions would enlighten us upon the subject of curability, I have collected and herewith present, in Table VII, the statistics of fifty-eight of them, taken, in fifty-one instances, from the reports for 1884. Of seven of the hospitals the reports are biennial, and consequently contain the results for two years each. In four instances the report from which these results were taken ended in 1884; in one instance in 1883, and in two in 1882.

I am well aware of the many influences, both favorable and unfavorable, which may, and often do, modify the number of recoveries, as well as of deaths, in public institutions, and which necessarily render the results of any one year unreliable as a test or measure of the work of a series of years, at any individual hospital. But at a large number of institutions on any given year, these influences would probably very nearly balance one another, and consequently the aggregate results would fairly represent the mean or average of the same group of institutions for a much greater length of time.

TABLE VII. ONE YEAR AT FIFTY-EIGHT AMERICAN INSTITUTIONS.

Institution.	State.	Year.	Admitted.	Recovered.	Per cent of Recoveries.	Died.	Per cent of Deaths.
Augusta,	Me.	1884	203	59	29.06	101	49.75
Concord,	N. H.	1884	141	18	12.77	24	17.02
Brattleboro,...	Vt.	1884	82	23	28.05	29	35.36
McLean,	Mass.	1884	113	34	30.09	17	15.04
Worcester,...	Mass.	1884	252	53	21.03	57	22.62
Northampton,.	Mass.	1884	136	25	18.38	25	18.38
Taunton,	Mass.	1884	283	85	30.04	65	22.97
Danvers,	Mass.	1884	530	96	18.11	101	19.06
Boston, City,...	Mass.	1884	121	34	28.10	32	26.45
Butler,	R. I.	1884	106	46	43.40	13	12.26
Hartford Retr't	Ct.	1884	97	37	38.14	18	18.56
Middletown, .	Ct.	1884	271	72	26.57	80	29.52
Bloomington,.	N. Y.	1884	136	55	40.44	27	19.85
Flatbush,	N. Y.	1884	479	47	9.81	101	21.09
Utica,	N. Y.	1884	372 [†]	89	23.92	56	15.05
Buffalo,	N. Y.	1884	275	80	29.09	43	15.63
Trenton,	N. J.	1884	175	52	29.71	64	36.57
Morristown, .	N. J.	1884	210	37	17.62	57	27.14
Penna. Hos., .	Pa.	1884	203	51	25.12	49	19.70
Harrisburg,...	Pa.	1884	128	23	17.97	36	28.12
Dixmont,	Pa.	1884	189	28	14.81	69	36.50
Danville,	Pa.	1884	201	37	18.41	29	14.42
Norristown,...	Pa.	1884	356	92	25.84	96	26.96
Warren,	Pa.	1884	203	36	17.73	46	22.66
Catonsville,...	Md.	1884	95	29	30.53	30	31.57
Mount Hope,...	Md.	1884	169	77	45.56	45	26.62
Washington, .	D. C.	1884	347	79	22.77	67	19.30
Staunton,	Va.	1884	133	55	41.35	36	27.06
Richmond,	Va.	1884	119	97	81.51	61	51.26
Weston,	W. Va.	1884	176	74	42.05	39	22.15
Raleigh,	N. C.	1884	106	26	24.53	11	10.37
Goldsboro,...	N. C.	1884	81	26	32.10	14	17.28
Morganton,...	N. C.	1884	71	31	43.66	9	12.67
Columbia,	S. C.	1884	293	72	24.57	143	48.80
Austin,	Texas.	1884	254	66	25.98	41	16.14
Little Rock,...	Ark's.	1884	82	42	51.22	21	25.61
Nashville,	Tenn.*	1882-84	222	67	30.18	62	27.93
Columbus,	Ohio.	1884	282	164	58.16	59	20.92
Newburgh,	Ohio.	1884	220	87	39.55	37	16.81
Dayton,	Ohio.	1884	188	60	31.91	37	19.68
Athens,	Ohio.	1884	223	96	43.05	63	28.25
Longview,	Ohio.	1884	220	56	25.45	58	26.36
Indianapolis, .	Ind.	1884	908	329	36.23	112	12.33
Pontiac,	Mich.	1884	192	62	32.29	29	15.10
Kalamazoo,...	Mich.	1884	174	17	9.77	9	5.17
Jacksonville,.	Ill.	1884	240	56	23.33	32	13.33
Elgin,	Ill.	1884	123	38	30.89	21	17.07
Anna,	Ill.	1884	220	67	30.45	33	15.00
Kankakee,	Ill.	1884	291	48	16.49	31	10.65
Mendota,	Wis.	1884	239	58	24.27	30	12.55
Oshkosh,	Wis.*	1883-84	601	148	24.63	115	19.13
Mt. Pleasant,.	Iowa.*	1882-83	534	120	22.47	98	18.35
Independence,.	Iowa.	1883	233	38	16.31	34	14.59
St. Peter,	Minn.*	1883-84	595	143	24.03	82	13.78
Rochester,	Minn.*	1883-84	299	55	18.39	43	14.38
Fulton,	Mo.*	1881-82	364	175	48.08	113	31.04
St. Joseph,	Mo.*	1881-82	316	110	34.81	49	15.51
Napa,	Cal.	1884	500	130	26.00	90	18.00
Totals, and mean per cent,			14,372	4,007	27.88	2,980	20.74

* Biennial. † 15 cases "found not insane" are deducted.

The aggregate of patients admitted at these fifty-eight institutions, in the course of the time specified, is 14,372; the aggregate of recoveries, 4,007; and the proportion of recoveries, calculated upon the admissions, 27.88 per cent, or a trifle more than one-fourth. The least relative number of recoveries, 9.77 per cent, was at Kalamazoo; and the largest, 81.51 per cent at Richmond.

In the following schedule the hospitals are arranged in groups, according to the proportion of their recoveries, each group differing five per cent from the one above or below it.

Below 10 per cent,	Flatbush and Kalamazoo.
From 10 to 15 per cent,	Concord and Dixmont.
From 15 to 20 per cent,	Northampton, Danvers, Morristown, Harrisburg, Danville, Warren, Kankakee, Independence and Rochester.
From 20 to 25 per cent,	Worcester, Utica, U. S. Gov't Hospital, Raleigh, Columbia, S. C., Jacksonville, Mendota, Oshkosh, Mt. Pleasant and St. Peter.
From 25 to 30 per cent,	Augusta, Brattleboro, Boston, Middletown, Ct., Buffalo, Trenton, Penna. Hospital, Norristown, Austin, Longview and Napa.
From 30 to 35 per cent,	McLean, Taunton, Catonsville, Goldsboro, Nash- ville, Dayton, Pontiac, Elgin, Anna and St. Joseph.
From 35 to 40 per cent,	Hartford Retreat, Newburg and Indianapolis.
From 40 to 45 per cent,	Butler, Bloomingdale, Staunton, Weston, Morgan- ton, and Athens.
From 45 to 50 per cent,	Mount Hope and Fulton.
From 50 to 55 per cent,	Little Rock.
From 55 to 60 per cent,	Columbus.
Over 80 per cent,	Richmond.

If there be no mistake in the record from the Virginia Central Asylum, at Richmond, that institution, so far as my knowledge extends, has exceeded every other of its kind, not in America alone but upon the whole surface of the earth, in the proportion of its recoveries. Forty years ago, it was doing well to report the recovery of eighty per cent of *recent* cases.

At the present time, it is rare that even sixty per cent are so reported, and the average in the United States, as we have just seen, is below forty per cent. But here we are confronted with a proportion of 81.51 per cent of *recoveries of all the cases admitted!* The moral to be derived herefrom appears to be, that, if any person yet unborn be blessed with the pre-natal power of foreordination of his own physical organization, and desire to recover in case he be afflicted with insanity, he should elect to be born a negro.*

There is yet another useful moral to be derived from the case. At the Danvers Hospital, which, before it went into operation, had cost more than \$3,500, for every patient for whom its accommodations were calculated, and more than \$2,500, for each of the seven hundred patients who have been crowded into it, the per cent of recoveries was 18.11. At the Richmond Hospital, which apparently could not have cost over \$100, and probably not more than \$50, per patient, the recoveries were equal to 81.51 per cent. The moral is so conspicuously obvious, that it would be a work of supererogation to repeat it.

In Table VIII, the fifty-eight hospitals and their statistics are grouped according to the States in which they are respectively situated.

The proportion of recoveries was the smallest in New Hampshire, and that proportion increased in the other States in the following order, Pennsylvania, Iowa, New York, Michigan, Minnesota, District of Columbia, Massachusetts, New Jersey, Illinois, Wisconsin, South Carolina, Texas, California, Vermont, Maine, Connecticut, Tennessee, North Carolina, Indiana, Maryland, Ohio, Missouri, West Virginia, Rhode Island, Arkansas and Virginia.

* The Virginia Central Asylum is for colored persons.

TABLE VIII. STATE GROUPS, ONE YEAR.

STATES.	No. of Hospitals.	Admissions	Recoveries.	Per cent of Recoveries.	Died.	Per cent of Deaths.
Maine	1	203	59	29.06	101	49.75
New Hampshire....	1	141	18	12.77	24	17.02
Vermont.	1	82	23	28.05	29	35.36
Massachusetts.....	6	1,435	327	22.79	297	20.69
Rhode Island.....	1	106	46	43.40	13	12.26
Connecticut.....	2	368	109	29.62	98	26.63
New York.....	4	1,262	271	21.47	227	17.99
New Jersey.....	2	385	89	23.12	121	31.15
Pennsylvania.....	6	1,280	267	20.80	316	24.69
Maryland.....	2	264	106	40.15	75	28.41
District of Columbia	1	347	79	22.77	67	19.31
Virginia.	2	252	153	60.31	97	38.49
West Virginia.....	1	176	74	42.05	39	22.15
North Carolina.....	3	258	83	32.17	34	13.18
South Carolina.....	1	293	72	24.57	143	48.80
Texas.....	1	254	66	25.98	41	16.14
Arkansas.....	1	82	42	51.22	21	25.61
Ohio.....	5	1,133	463	40.86	254	22.41
Michigan	2	366	79	21.58	38	10.33
Indiana	1	908	329	36.23	112	12.33
Illinois.....	4	874	209	23.91	117	13.38
Wisconsin.....	2	840	206	24.52	145	17.26
Iowa.....	2	767	158	20.60	132	17.21
Minnesota.....	2	894	198	22.14	125	13.98
Missouri	2	680	285	41.91	162	23.82
California.....	1	500	130	26.00	90	18.00
Tennessee.....	1	222	67	30.18	62	27.93
Totals, and Mean per cent	58	14,372	4,007	27.88	2,980	20.74

If the statistics of recoveries be arranged in accordance with the groups popularly called the Eastern, the Middle, the Southern, and the Western States, the results are as follows;—and to them are appended the percentage of deaths, calculated, like the recoveries, upon the number of patients admitted.

In the Eastern States the total of admissions was 2,335; the total of recoveries, 582; and the proportion of recoveries, 24.92 per cent. The number of deaths was 562, and the proportion, 24.07 per cent. The number of recoveries exceeded that of deaths by only 20.

In the Middle States the number of admissions was 2,927; the number of recoveries, 627; and the propor-

tion of recoveries, 21.42 per cent. There were 664 deaths, equal to a percentage of 22.69. The deaths have a majority of 37 over the recoveries; and the proportion of both recoveries and deaths is less than in the Eastern States. It has been suggested in one of the criticisms of a psychological periodical, that the small ratio of recoveries in Massachusetts is a consequence of the published writings of the superintendent of one of the hospitals in that State. As, according to these statistics, the proportion of recoveries is less in the Middle States than in Massachusetts, the proposition now is,—*Whose published writings were the cause of it?*

In the Southern States 1,844 patients were admitted; and 632, or 34.27 per cent, recovered. The total of deaths was 496, or 26.90 per cent. The proportion of recoveries is nearly ten per cent on the admissions in excess of those of the Eastern States; and that of deaths nearly three per cent. The proportion of recoveries is considerably increased by the statistics of the Richmond Asylum. If those statistics be set aside, and the computation made upon the returns from the other Southern institutions, the results are;—Admissions 1,725; recoveries 535; per cent of recoveries, 31.21. Deaths 435; percentage of deaths on admissions, 25.21.

In the Western States the admissions were 7,266; the recoveries, 2,166; and the proportion of them 29.81 per cent. Of deaths there were 1,258, or a proportion of 17.31 per cent, which is more than five per cent of the admissions less than in either of the other sections.

Arranged in accordance with the *increasing* ratio of recoveries, that is, from lowest to highest, the sections stand as follows;—Middle, Eastern, Western, Southern;—and in accordance with the *decreasing* ratio, from highest to lowest, of deaths, as follows; Southern, Eastern, Middle, Western.

These results are derived from the work of but a single year, and hence are unreliable as an established formula. By the extension of the investigation over a sufficient series of years, something more reliable might be obtained. Then, and not now, will be the time to speculate upon the causes of the differences.

STATISTICS OF PENNSYLVANIA HOSPITALS.

The table to which attention is now requested includes statistics of the seven hospitals in Pennsylvania, during a period of five years each, with the exception of that at Warren, which is of but four years. At all of them the period ended in, or with, the year 1884.

TABLE IX. PENNSYLVANIA HOSPITALS.

		Admitted.	Recovered.	Per cent of recoveries.	Died.	Per cent of Deaths.
Frankford	1880-84	196	58	29.59	39	19.90
Penna. Hospital	" "	973	328	33.74	147	15.11
Dixmont	" "	968	216	22.31	277	28.61
Harrisburg	" "	772	121	15.97	174	22.54
Danville	" "	720	114	15.83	118	16.39
Norristown	" "	1,458	275	18.86	290	19.89
Warren	1881-84	847	92	10.86	113	13.34
Totals and Mean per cent		5,934	1,204	20.29	1,158	19.51

The whole number of cases admitted was 5,934; the total of recoveries, 1,204; and the proportion of recoveries 20.29 per cent. But Norristown and Warren are both new hospitals, and in their first years received many transfers from other institutions. Hence they are unfairly represented. We will therefore permit the statistics of only the last two years at these institutions to enter into the computation, retaining, for the others, the full period of five years. Those statistics are as follows.

		Admitted.	Recover- ed.	Per cent of recoveries.	Died.	Per cent of Deaths.
Norristown....	1883-1884	777	195	25.09	219	28.18
Warren	1883-1884	388	70	18.04	80	20.62
Totals and Me'n per cent.....		4,794	1,102	22.98	1,054	21.98

By a substitution of these figures for those contained in the next preceding table, it will be found that the whole number of admissions is 4,794; the number of recoveries, 1,102; and the proportion of recoveries, 22.98 per cent, or a gain of 2.69 per cent on the admissions, by the change.

At the four State Hospitals of Massachusetts, the proportion of recoveries in the three fiscal years ending in 1882, and the statistics of which form the basis of an article on curability in the Northampton, Mass. report for that year, was 22.25 per cent. This is seventy-three hundredths (.73) of one per cent less than that of the Pennsylvania hospitals, according to these statistics. But this difference is more than counter-balanced by the fact that the Massachusetts statistics relate to *persons* only, while those of Pennsylvania relate to *cases*. In the latter all duplicate, triplicate and multiply recoveries are included, while in the former they are all *rejected*.

By the first of the two tables the deaths were 1,158, and their proportion on the admissions, 19.51 per cent. By the last table they were 1,054, and their proportion, 21.98 per cent, or an increase of 2.47 per cent. This increase is a natural result, as deaths are generally comparatively few in the first two or three years of a hospital's operations.

TESTIMONY OF THE DANVERS HOSPITAL.

The experience at the newest State institution in Massachusetts is both instructive and disappointingly

interesting, in the light which it throws upon the curable, or rather the incurable, condition of a great mass of the insane of the present epoch in that State.

The Danvers Hospital was opened for the reception of patients on the 18th of May, 1878. It is, emphatically, one of those establishments upon which a flood of money has been poured, for the purpose of creating a curative institution as nearly perfect as possible under the light of existing knowledge. If abundance of pecuniary means in construction, together with what was believed to be the highest embodied ideal of architectural arrangements, could cure insanity more rapidly than a less costly and more simple structure, that hospital, most assuredly, was prepared for a demonstration of the proposition. It was evident that great efforts were made to arrive at such a demonstration, and thus prove that the curative advantages of the institution were an adequate, or—since the value of reason restored is not to be measured by dollars and cents—*more* than adequate compensation for the excess of expenditure. The usual custom of a large transfer of chronic and incurable cases from older hospitals or asylums to the new one, was here omitted, and the supply of patients was derived chiefly from current commitments. By this means the proportion of recent cases was much higher than usual from the first; and as Boston and five other large centres of population—which usually furnish a larger ratio of recent cases than the rural districts—are within a comparatively short distance from it, that proportion was raised still higher.

The fiscal year of the State institutions terminated four and one-half months after the hospital was opened. During this period 305 patients were admitted; and 26, or 8.82 per cent, discharged recovered. In the

course of the next—1878–79—fiscal year, 653 were admitted; and 115, or 17.61 per cent, discharged recovered. In 1879–80 the admissions were 581, and the discharge of recoveries 165, making the percentage of the latter 28.40. At this point the proportion of recoveries stopped upon its ascending scale, and took a retrograde direction. In 1880–81 the admissions were 497, the recoveries discharged, 124, and the percentage, 24.95; in 1881–82, admissions 512, discharged recoveries 89, percentage 17.38; in 1882–83, admissions 488, discharged recoveries 80, percentage 16.39; and in 1883–84, admissions 530, discharged recoveries 96, and the percentage of the latter 18.11.

The whole number of admissions, during the six years and four and one-half months, was 3,566; and that of discharged recoveries 695, or an equivalent of 19.49 per cent. In the first three full fiscal years, the admissions were 1,731, the discharged recoveries, 404, and the per cent of the latter 23.34; and in the last three fiscal years, admissions 1,530, discharged recoveries 265, per cent of recoveries 17.32. In the first period of three years, the deaths were 240, or 13.86 per cent of the admissions; and in the last period, 285, or 18.63 per cent of the admissions. In the first period the deaths were 240, a per cent of 59.4 on the recoveries; and in the last period, they exceeded the recoveries by 20, the deaths being to the recoveries as 57 to 53.

The new formulæ for statistics in Massachusetts give the ability still further to illustrate the character of the recoveries,—an ability rendered by the reports of no other State in the Union. The new tables were adopted in 1879, and first used in the reports for 1879–80. In the course of the five fiscal years ending September 30, 1884, 554 patients, or *cases*, were discharged recovered from the Danvers Hospital; but

115 *persons*, who had been discharged recovered a total of 121 *times*, had returned to it. Within the last three years,—which are included in the foregoing years—the discharged recoveries were 265; but, during the same time, 80 *persons*, representing 86 of those recoveries, were readmitted. So far as the community is concerned, these recoveries offset, or cancel, the same number of the discharged recoveries, and the added recoveries in the population, instead of being 265, is 265 minus 86, or 179, a diminution of about one-third, and only 11.70 per cent on the number of admissions during that period.

RE-ADMITTED RECOVERIES IN MASSACHUSETTS.

The annual report for 1881–82 of the Northampton Lunatic Hospital, contains an article on the statistics of the State Hospitals of Massachusetts during the three years which had then elapsed since the adoption of the new series of tables. I desire to call attention to some points in the statistical history of recoveries, as illustrated by the same hospitals, during the two years since that article was published. For this purpose a table is here introduced which shows, for the fiscal years 1882–83 and 1883–84:

- 1st. The number of persons admitted who had previously been discharged recovered;
- 2d. The number of times they had previously recovered;
- 3d. The ratio of recoveries to persons; and
- 4th. The number of persons discharged recovered during those two years, at each of the four hospitals aforesaid.

TABLE X. TWO YEARS AT MASSACHUSETTS HOSPITALS.

HOSPITALS.	ADMISSIONS.			DISCHARGES.
	Persons admitted who had previously been discharged recovered.	No. of times they had recovered.	Ratio of recoveries to persons.	Persons discharged recovered.
Worcester.....	43	118	2.73	109
Taunton.....	64	147	2.29	145
Northampton.....	21	39	1.85	53
Danvers.....	49	54	1.1	176
Totals.....	177	358	2.02	483

The number of persons admitted who had previously been discharged recovered, was 177; and they had been discharged recovered a total of 358 times. There were 181 more recoveries than persons. In other words, the number of recoveries was four more than twice as great as the number of persons. Each person had recovered, as a mean or average number, 2.02 times. Regarded, during the last two years, from a debt and credit point of view, those four institutions cancelled, by taking back from the general population, no less than 358 recoveries for which they had been credited. During the same time they discharged, recovered, 483 persons, which is only 125 more than the *recoveries*, (not persons) which they had taken back.

Summary. A brief résumé of the most important results of the foregoing studies, expressed in the percentages of recoveries, may be found convenient for reference.

1. *Cases of first attack ; duration less than three months.*

- a. Earle's 8,316 cases, at 23 British Asylums. Recoveries 48.71 per cent.
- b. Chapman's 38,283 cases, at 46 British Asylums. Recoveries 48.72 per cent.

2. *Cases of first attack ; duration less than twelve months.*

- a. Earle's 10,929 cases, at 23 British Asylums Recoveries 44.06 per cent.

b. Chapman's 50,409 cases, at 46 British Asylums. Recoveries 43.79 per cent.

3. *Not first attack; duration less than twelve months.*

a. Earle's 4,768 cases, at 23 British Asylums. Recoveries 55.37 per cent.

b. Chapman's 19,574 cases, at 46 British Asylums. Recoveries. 53.61 per cent.

In neither of the three foregoing classes have we any American statistics, because our institutions, in the tabulation of their cases, make no discrimination which would render such a classification possible.

4. *All cases of duration less than twelve months.*

a. Earle's 15,697 cases, at 23 British Asylums. Recoveries 47.49 per cent.

b. Chapman's 69,983 cases, at 46 British Asylums. Recoveries 46.52 per cent.

c. Earle's 8,063 cases, at 15 American Institutions. Recoveries 38.59 per cent.

5. *All recoveries, calculated on all admissions.*

a. Chapman's 93,443 cases, at 46 British Asylums. Recoveries 37.95 per cent.

b. Earle's 33,318 cases, at 39 [15+24] American Institutions. Recoveries 29.15 per cent.

c. Earle's 23,052 cases; 3d period at 20 American Institutions. Recoveries 29.91 per cent.

d. Earle's 14,372 cases; in one year at 58 American Institutions. Recoveries 27.88 per cent.

It will be perceived that, so far as these statistics are an index, the recoveries in British Asylums, both of recent cases and of all cases admitted, exceed the recoveries in the American institutions by between 8 and 9 per cent.

The most important general conclusions to be derived from the statistics included in this paper, are, first, that the old claim of curability in a very large majority of

recent cases is not sustained, and that the failure to sustain it is more apparent and more striking than at any antecedent time; and, secondly, that the percentage of reported recoveries of all cases received at the hospitals in this country still continues to diminish.

It is believed that this diminution is, in part, to be attributed to the admission of a larger proportion of chronic cases, and of cases of greater degeneracy from their origin; in part, from the increasing though, as there is good reason to believe, still far from universal practice of not reporting, *as recoveries from insanity*, either mere restorations from a drunken debauch, or forced temporary suspensions from habitual intoxication; and, in part, perhaps, from the adoption of a higher degree of improvement as the standard or criterion of recovery. It may be that there is still another cause of that diminution. Drs. Bucknill and Tuke, in their treatise upon insanity, mention what they call "cooked" statistics. It is possible that, in the United States, this class of published results is decreasing, and that the reported statistics are more generally given to the public in the spirit of a conscientious loyalty to scientific truth.

In conclusion I would express the hope, that the time is not far distant at which the American Association of Superintendents will so perfect its statistical system as to make a distinction between persons and cases; and enable the reader to learn how many of the reported recoveries are first recoveries and how many subsequent to the first. This improvement was made in the Massachusetts statistical tables, as already mentioned, in 1879; and in those of the British Medico-Psychological Association in 1883. Surely our Association ought not to lag far behind in the matter.

NEW WINE IN OLD BOTTLES.*

BY ORPHEUS EVERTS, M. D.,
Medical Superintendent of the Cincinnati Sanitarium.

When we consider the unnumbered ages through which successive generations of pre-historic men evidently wandered—naked, savage, cityless—poverty-stricken by inheritance, and accumulating knowledges, but slowly, before they became capable of memorizing the existence of the race; or the thousands of years since, through which we can trace their progressions by their foot-prints, and measure, somewhat accurately, the velocity of their movements; we may, indeed, realize the vanity of personal ambition, and the triviality of individual accomplishment; but we should not, therefore, be deterred from continuous and unflinching exertion in our efforts to increase, diffuse, and perpetuate, useful knowledges. It is hopeful, and probable, too, that by such efforts the ratio of human progression has been, and may be, increased; and that no contribution, however slight, to the momentum of the advancing races is, or ever will be, unobserved, or lost.

What then can we, who are supposed to be interested, especially, in the sciences of psychology and psychiatry, do to promote their growth, in the interest of human progress?

If "Science" implies "Knowledge duly arranged and referred to general truth, and principles on which it is founded"—whatever tends to such an arrangement of knowledge, of any given character, must be promotive of its growth as science.

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, June 18, 1885.

As a slight contribution to the science of psychology, that is to be, it has occurred to me that some suggestions respecting the relation of words to ideas, and the necessity of definite expression for the communication of definite ideas, essential to harmonization of truths, from which, as a foundation, principles may be derived and science promoted, might not be unprofitable at this time, however doubtfully received.

That communicability of the higher and more complex states of brain-consciousness—or human consciousness—called ideas, and constituting knowledges, is essential to intellectual growth, may be known from the fact, everywhere observable, that through the entire range of conscious beings there is a well-established correspondence of capabilities of expression, or communicating states of consciousness, to intellectual capabilities, and the acquisition of knowledges: the difference between higher and lower orders of men, as well as between men and lower animals, being everywhere conspicuous because of such correspondence. It is, also, apparent that there could be no perpetuation of ideas beyond individual existence—hence no accumulation of knowledge—without this possibility of communication.

That accuracy of communication of states of consciousness, constituting ideas and knowledges, is essential to the development of science may be known from the fact that only by such accuracy can knowledge be so arranged, and referred to truths and principles, as to constitute science.

An ambiguous use of words and phrases can not be otherwise than misleading—tending to confusion—and to state unities in terms of difference must inevitably beget antagonisms of inference, without justification by truths.

That there ever has been, and must be, evolutions of language corresponding to successive evolutions of ideas and knowledges, need not be more than asserted. That modifications of ideas can only be effected, so as to become general, by modifications of language, belongs to the same category of facts and inferences.

Respecting the sciences of psychology and psychiatry, or the knowledges out of which sciences may be constructed, it is known to us all, that they are now, and have of late been, undergoing important modifications. It may be said indeed of most of persons now interested in these subjects, that their states of consciousness respecting the facts, phenomena, and inferences pertaining to them, are in a transitional condition.

For example: It has been taught heretofore, and still is, by the schoolmen of all civilized countries—and generally accepted as true: that all manifestations of consciousness, intelligence and power, by human beings, are effected by, and proceed from, certain supersensuous, hence hypothetical, entities, that are supposed to attach themselves in some mysterious way to, and dwell for a time within, such human beings, without becoming incorporate integers thereof.

But, notwithstanding such teaching was, and is, in accordance with the appearances of all facts and phenomena relating thereto, as seen upon the plane of intellectual recognitions hitherto attained, and still occupied by the greater number of living men—and the invariable practice of mankind in all ages, and stages of development, of ascribing all natural phenomena, not otherwise explicable by human capabilities and knowledges, to superhuman, or supernatural, hence hypothetical beings, endowed with intelligence and power equal to the necessity implied—now many individuals, if not schools, devoted to the

cultivation of science, and the development of the race, have reached a plane of recognitions, from which such supernatural, hypothetical beings—together with the necessities from which they had birth—are fast disappearing; lifted like morning mists from an ever-widening horizon—and dispelled, by the rising sun of science.

According to modern recognitions all so-called psychical phenomena—sensation, perception, memory, imagination, ratiocination—are but natural manifestations of variously complicated states of consciousness incidental and peculiar to material mechanisms, called brains.

These states of consciousness seem to be, and so far as facts justify belief, are, functional responses to organic necessities; essential, first, to the preservation of individual existence—manifested as hunger for food: and second, to the preservation of the species—manifested as sexual appetites; which constitute the primary fundamental states of consciousness, common to all conscious beings—evolutions from which—growths—or expansions—constitute the entire range of subsequent states—corresponding from first to last, to evolutions of capability relating to these two great ends of organization.

But presuming that all advanced students who have adopted a physiological basis for psychological observation, to be familiar with such modern recognitions—having learned to distinguish the phenomenal in nature from the actual or material—and to associate thought with that which thinks, as they associate light with materials and conditions invariably essential and antecedent: presuming, also, that they are familiar with the entire range of relations of language to ideas, and the necessity of words for the preservation of knowledges—attention may be directed at once to the necessity

and difficulty of so adapting old words to the forms of new ideas, as to give them fitting presentation, and distinguishment, whereby modern recognitions of truths may become definite and perspicuous. That one interested in the subject can not now open a book or periodical of late date, in which psychological matters are discussed, without being confused by, or under the necessity of translating, words and phrases used to communicate ideas at variance with the old and true intent of such words, justifies this call.

For example: Many, if not all, of our best writers in psychology and psychiatry, by their use of old words and phrases, would still seem to represent mind as a function-performing entity—if not a loose organization of entities, capable of performing independent functions—superior to, if not regardless of material mechanisms and conditions. Thus: (I read from an article in a late number of a notable journal of psychology and psychiatry, by a reputable and well-known author, entitled to and receiving our highest consideration of respect) as follows: “But while careful attention must be given to the physical condition (of the insane) so as to restore the whole nervous system to a healthy action, it must not be forgotten that *the mind* must also be occupied, or diverted from *its* morbid ideas.”

In the same article the author speaks of making “a direct appeal to *the mind* through the sense of vision”—and of means whereby “an avenue may be opened (*to the mind*) for the entrance of other and different thoughts;—and of “infusing into *the mind* some idea or impression which may change the whole course of *the mind* from a downward to an upward direction,”—and of “dull and stupid children whose *minds* seem unable to take up and retain,” &c., &c.—and of “giving employment to the thoughts and emotions,” &c., &c.

Now, all of this, and the like, if read from the old metaphysical platform—or by one who can still look on a man as Dr. Clouston says the medical psychologist can not—as “A Mind or A Soul with a troublesome body attached,” is in good form, and well adapted to the end of perpetuating ideas, and concepts, that modern science discredits as superstition, or survivals of error pertaining to lower planes of recognition, and mythopoeic conditions of human capabilities and knowledge.

But for purposes of promulgating modern recognitions of truth, and promoting the growth of science, and human capabilities, it is open to serious criticism.

What does it signify literally, if not that Mind, instead of being an aggregation of phenomena inevitably sequential to certain antecedent conditions independent of which it has no tangible or knowable existence, is, itself, substantive and nominative—capable of being, doing, and suffering? Is not only itself but the sufficient cause of itself, not only thought, but that which thinks?

Another ambitious and prolific contributor to the periodical literature of psychology and psychiatry in this country in a recent publication uses the following forms of language:

“The emotions and the intellect are not twin-born, though they mutually influence each other. They do not always go hand in hand, nor dwell harmoniously together (mark the words) *in the brain*. In good cerebral organization they are often at war with each other.”

What, we may well ask, is the true intent and meaning of such diction, if it be not to teach the old doctrine or assert as a fact that there are such objective beings as “The Emotions,” and “The Will,”

that after birth (from what parentage?) are no longer phenomenal—but capable of performing functions—and from their respective dwellings in the brain, issue forth, like feudal barons of the olden time, to carry on warfare with each other?

Query: Is “The Will” thus constituted capable of manifesting emotions? Or can The Emotions carry on warfare with “The Will” without any will of their own? If the so-called “Will” is emotional, and “The Emotions” are wilful—how are they to be distinguished?

But this same zealous author says further: “Though insanity is marked generally by changes of character, that change is seldom manifested in augmenting the power of *The Intellect* and *The Will* over the emotions or passion, on the contrary the latter often subvert the former.” Thus ascribing objective characteristics and functional capabilities to phenomena, or subjective manifestations of consciousness of which, as a matter of fact, brain mechanisms are alone capable. As well continue to speak of the pain of rheumatic joints—the heat of febrile conditions of the blood—the cough of tubercular lungs—as malignant supernatural entities doing the bidding of their master, the imputed arch enemy of mankind, as they were once believed to be—capable of “seizing,” “attacking,” shifting position at will, &c., as our language still indicates they were once supposed to do—thus causing “all the ills that flesh is heir to”—to be counteracted by counter assaults on the part of the physician with deadly drugs—and so purged out—puked out—burned out—drawn out in copious draughts of blood—as was once the custom—alas! not altogether now abandoned—as still to use such language in relation to modern psychological recognitions.

BUT the confusion which results from such use of words and phrases by an author who really recognizes mental phenomena as "inevitable sequences of antecedent conditions" of material mechanisms, finds fuller illustration in the following paragraphs; which though detached are not garbled, or perverted from their true purport.

"Metaphysical conceptions of mind"—says our author—"have long stood in the way of true progress in psychological knowledge. To this has been due the fact that physical disease, as a basis of all forms of mania, now a generally accepted truth, was so long controverted." "Momentary impulses and suggestions of a morbid kind obtrude themselves upon many healthy minds, like the vague feelings, of unreasonable unrest and depression which obtrude unbidden into the several chambers of the cerebral cortex."

Thus our author renounces and denounces "Metaphysical conceptions of Mind," and recognizes and approves such conceptions, in different paragraphs if not in a single paragraph, of the same article. But to pursue the subject further by way of illustration:

"Facts like these" says our author alluding to matters cited, "show the capabilities of the mental faculties" (meaning thereby, The Intellect—The Emotions—The Will, &c.,) to become partially involved in aberrant action without notable derangement of (What? Physical organs by physical disease? No!) the reason."

Again our author intent on denouncing "Metaphysical conceptions of Mind," says: "The Metaphysical conception of Mind—the abstraction made into an entity, as Maudsley justly observes, "has overridden discerning observation" in some quarters, and eminent and observing men have thus suffered their judgment

to become biased by the idea that the faculties (of what; the brain? No!) *the mind* can not act separately."

What do we mean by faculties? "Abilities to act or perform; capacity for any natural function." Can an abstraction—a phenomenon—perform natural functions, without first being transmuted into an entity? If the so-called "faculties of the mind" can not be made into entities, how can they act separately—or act at all?

But here we have the sum total of the author's philosophy, as well as an admirable illustration of the confusion into which the inconsiderate use of old words or phrases, in an attempt to express new ideas, involves him.

"Normal Mind," he says, "is the sum of the aggregate display of the cerebro-psychic functions. Abnormal mind consists of such disorders of one or more of the cerebro-psychic functions as to cause so marked a change in the psychical characteristics of the individual whether principally involving *the emotions*, the reasoning powers, or *the will*, as to make an inconsistency and inharmony in the person's character explicable only by disease."

Comment is needless. Illustrations of this kind are endless. If the subject is worthy of consideration enough has been said to attract attention to it.

It may be thought by the severely critical that such confusion of expression is indicative of confusion of ideas. I prefer to think otherwise, and attribute it to thoughtlessness of the relation of words to ideas, and long established habits of speech, and so call for reformation in the interest of science and the diffusion of correct as well as useful knowledge.

CLINICAL CASE.

RECOVERY AFTER LONG CONTINUED ARTIFICIAL RESPIRATION.

BY G. H. HILL, M. D.,

Superintendent of the Hospital for the Insane, Independence, Ia.

Alice H. W., 28 years old, married, two children.

Seven yeas ago, before marriage, was melancholy, but recovered at home in three months. Since the birth of her last child, ten months ago, has been more gloomy and depressed than natural; for four months has felt that her mind was breaking down; can not concentrate her attention on her work or reading. Has morbid impulses and fears she may kill herself or children. Thinks she never can get well, and will become a burden to her relatives. Nursed her baby until one week ago. She is thin and pale. Admitted to the Hospital for the Insane, at Independence, Ia., August 28, 1884.

Placed in best ward, ate and slept fairly, was quiet, conversed a little, wrote letters home, busied herself knitting for her children, revealed no insanity, except that she complained, when questioned, of confusion of mind and regarded her prospect as unfavorable. Had vulvitis, endocervicits and retroflexion of the uterus for which she received local treatment.

Her husband assured me that she was entirely trustworthy, and urged that she be allowed as much outdoor exercise as possible. Besides daily walks and exercise on the croquet ground, she rode to town with an attendant one morning of the first and one of the second weeks she was at the hospital. When she had

been at the institution just three weeks, she was permitted, in company with another female patient, to visit town without being in charge of an attendant. At noon she failed to return to the hospital. I was told that she was at one of the hotels and too tired to ride back. I telephoned the landlord, who replied that she was asleep in the parlor and evidently had been taking ether. He was instructed to call a physician at once, and to give me the doctor's opinion, which was that the patient was dying from chloroform poisoning. When myself and assistant arrived where the patient was, we found her entirely unconscious, gasping spasmodically for breath once or twice a minute and completely relaxed and livid in appearance. This was at a quarter after one in the afternoon. Her pulse was 120, small but regular. Artificial respiration was begun at once in this manner: The patient's hands were drawn directly above the head as far as possible, then placed upon the epigastrium with firm pressure at the rate of twelve times per minute. These regular motions were continued for *eight hours*, when the patient returned to consciousness, and voluntary breathing was secured. If at any time during these eight hours artificial respiration had been stopped for five minutes, cyanosis and death would have been the immediate result. The following facts were finally determined:

After reaching town the patient bought at one of the drug stores, one ounce of chloroform and sixty grains of opium, neither the bottle containing the chloroform nor the pill-box containing the opium was labelled. She went directly to the parlor of the hotel, and about 10.30 A. M., swallowed ʒvi of the chloroform and gr. xxx of the opium. Soon she became somewhat intoxicated, prayed that she might go to heaven, that her children might meet her there, &c. At noon

she vomited a little, then gradually fell into a profound sleep. Her pupils were not closely contracted and it was not known that she had taken opium until artificial respiration had been in progress two hours.

The following treatment was used: $\frac{1}{60}$ grain of atropia every two hours, hypodermically during the afternoon and evening, \mathfrak{zvi} of whisky hypodermically during the early part of the afternoon; once an hour afterward \mathfrak{zi} of whisky and \mathfrak{ziii} of milk, were administered per rectum. During the night and the next day all nutriment and medicine were given per rectum, so as to avoid gastritis so far as possible, which we feared would be produced by the chloroform. From 9 P. M. until midnight, respiration was continued, slowly and irregularly by keeping the patient awake, and by urging her to fill the lungs. The last half of the night artificial respiration became necessary and was kept up most of the time. She was speedily restored from the effects of the chloroform and the opium. Two months afterward she was nearly recovered from her melancholy and is now quite well at home.

ABSTRACTS AND EXTRACTS.

SPONTANEOUS RUPTURE OF THE HEART.—A case of this character has recently occurred in the Gloucester County Asylum, which, from the description by Harding H. Tompkins, M. R. C. S., in the *British Medical Journal* (May 2, 1885), appears to have been strikingly similar to a case reported in the *AMERICAN JOURNAL OF INSANITY*, for January, 1885, and to three other cases referred to in that article. The patient, a widow, aged 63, was admitted to the asylum in 1881, in a state of acute melancholia. She was suicidal and at times dangerous to others. By 1883 she had become quiet during the day, but maniacal and very obscene by night, requiring twenty grains of chloral-hydrate each night. She was, however, in good health. Subsequently her bodily health gradually declined, until, by November, 1884, she had become very quiet and rather depressed. On January 7th, 1885, she complained of feeling weak and tired, and was therefore kept in bed, where she remained without any special symptom, taking her food as usual. She remained in bed until January 10th. On that day, a nurse who, on leaving her just before, had not noticed any change, on returning, a few minutes later, found her breathing heavily, ghastly pale, and apparently dying. When seen by Mr. Tompkins, two or three minutes later, she was unconscious, with eyes wide open and dilated pupils, the conjunctivæ being almost insensitive; she was cold and pulseless; neither could any sound be heard over the cardiac area. By the direction of Mr. Craddock, the medical superintendent, fifteen minims of hydrochloric ether were administered hypodermically, hot water bottles were placed round her, and a mustard-plaster applied to the chest, after which the pupils contracted somewhat, and the conjunctivæ regained their sensitiveness; she was also able to swallow a little brandy-and-water. Her pulse was now very feeble, rapid and irregular, numbering 180 beats to the minute. In a quarter of an hour the injection was repeated, but she gradually grew worse, and relapsed into a semi-comatose condition, dying suddenly one hour and a few minutes after the attack.

The post mortem examination was made forty-seven hours after death. The body was free from external marks of violence, but the skin throughout was of a peculiar white and waxlike appearance. The brain weighed fifty-one ounces and a half. The as-

cending parietal convolution on the left side was in a state of yellow softening, as also were the whole of the right occipital lobe, and about two-thirds of the left cerebellar, slender and inferior lobes. The arteries at the base were atheromatous and contained calcareous plates. The heart weighed twelve ounces and a half. On opening the pericardium a large dark clot was seen entirely hiding the heart; this proved to be six ounces and a half in weight. On removing the heart there was seen a jagged opening into the left ventricle, an inch and a quarter long, running at the posterior aspect parallel with the septum, and about midway between the base and the apex of the heart. On opening the heart, the internal opening was found to be hidden by the base of the musculus papillaris, which was ruptured, and the aperture was but little larger than would admit the head of a probe. The left ventricle was rather hypertrophied, and the whole substance of the heart was very fatty, the point of rupture appearing more particularly so and also being much thinned. A section through this opening showed the muscular fibres to be much torn up, and separated to a greater extent even than the external opening. All the valves were very atheromatous, except the pulmonary. Microscopic examination of a specimen taken from near the rupture showed little more than streaks of granules, the proper heart-structure being entirely hidden, or replaced by fat; here and there ill-defined muscular fibres could be seen, and these also were studded with the products of fatty degeneration.

Viewed in the light of the autopsy, it was thought probable that the collapse occurred upon rupture of the musculus papillaris, and that after this the heart partially regained its power, although the blood was gradually tearing up its structure, and forcing its way toward the pericardium; on rupturing which the pericardial cavity was suddenly filled, all action instantly ceased and the patient died. This explanation of the time the patient lived after the first symptoms was suggested by the condition of the heart-wall, the substance of which was much more extensively lacerated than was either the inner or the outer opening.

TREATMENT OF MANIACAL EXCITEMENT.—Dr. J. A. Campbell, Superintendent of the Counties Asylum, Carlisle, in a paper read at the last meeting of the British Medical Association, offered the following remarks and results of his experience in the treatment of maniacal excitement:

1. In the insanity of masturbation, I have used careful feeding, blood-restorers, out-door exercise, sleeping under supervision, in some cases circumcision, the morning shower-bath, and, if a sedative was really required, bromide of potassium, on account of its anaphrodisiac qualities. A large proportion of this class adhere to their habits, drift into dementia, and die of phthisis.

2. Puerperal mania. In the ten years ending 1884, forty cases, occurring within a few days of confinement, and exhibiting acute excitement, came under my care. All except four recovered—90 per cent. Of the four who did not recover, two remain in the asylum; two died, one while away convalescent on a month's trial, the other from phthisis, which she had in a far advanced state before confinement. I have found that by careful feeding, tonic treatment, and attention to the general health, with out-door exercise whenever the patient can bear it, the excitement speedily disappears, and the tendency of the disease is to recovery. I have never seen a patient die during an attack of puerperal mania, except from previously existing disease, or an acute disease occurring during the course of the attack.

3. In the recent cases we call acute mania, I do not enter on those cases of very short duration which we term ephemeral, which only last a few hours or a night, and where the recovery is as sudden and complete as the invasion was unlooked for and unheralded by any known train of symptoms. I take the class of cases we all recognise and see a large proportion of. I do not believe that at the stage excitement has reached when the patient comes under asylum treatment we can at once cut short the attack; though I do not see why, at an earlier stage, before the brain congestion has reached the point where an explosion of excitement takes place, treatment which would divert nerve action to other parts of the body, produce muscular action tending to exhaustion and predisposing to sleep, with suitable feeding and sleep-compelling medicine, should not entirely avert an attack of excitement. I believe treatment can shorten an attack of excitement in many cases. I am certain, also, that I have seen cases run a long course of excitement uninfluenced by such treatment as I could use, without feeling it might have an evil influence on recovery. I believe extreme purgation, the free use of tartar emetic, and the constant use of opium in large doses will subdue excitement, at least for the time. I have seen cases treated in this way. I do not use such treatment, as I am convinced it retards—probably prevents—recovery. During the two years ending 1884 I admitted fifty-

six patients of this class, twenty-eight of each sex. The average duration of excitement was fourteen days; in the males thirteen, and in the females sixteen days. Of this number two males remained excited for a month, and one for two months; while four females ran a long course of excitement, extending to five, six, eight, and ten weeks. These cases were specially treated with out-door exercise, and were carefully fed; kept out as long as they could stand exercise or the weather would allow. Sedatives were used merely to render the patients manageable in fourteen cases. Sleep-producers were given in six, and only where sleep did not in a night or two follow from the exercise. The subsidence of the excitement was carefully noted from the time at which the patient could be treated in an ordinary ward or sent to work, and was calm in demeanour and action. I know the great difficulty there is in estimating mental states, but I think all recognise acute mania, and know pretty well the state in which a patient is who is trusted without a special attendant to inhabit a well-furnished and decorated ward. During the period of excitement one, sometimes two, attendants were devoted to each patient. I most distinctly hold that acutely excited patients should be treated separately, away from other patients; and I am now certain that persistent muscular action in the open air is the safest, quickest, most effective, and most natural means of promoting recovery from the state known to us as acute mania. I of course include suitable and frequent feeding, the use of tonics and stimulants, and the ordinary warm bath. Were more time at my disposal, I could show that a course of acute excitement could be run, under judicious treatment, with very little loss of body weight and without utterly excessive feeding.

4. In insanity from drink, the excitement need not be of long duration. A considerable number of such cases come under my care, and I find a good purgative, plenty of liquid food, copious libations of cold water, and a few days spent in the open air, to be all that is required as treatment; loss of sleep for a night is not of the least consequence.

5. In cases of periodic mania which run a given course, where excitement gradually increases till it reaches a climax and then gradually subsides, I have of late years only occasionally had to give continuous sedatives to render the patient manageable, or hypnotics to enforce sleep for the patient's sake and that of others. Thorough continuous out-door exercise is the proper treatment for such cases. Latterly I have dictated several of this class

on milk, vegetables, and farinaceous food, and I think with good result. We know certain diets in certain constitutions produce irritability, discomfort, and the converse.

6. In epileptic insanity, the influence of continued treatment by bromide of potassium in preventing excitement and reducing the number of fits has been so long proved that I should think the treatment is made use of in most asylums, or should be. Dr. Macphail, in his valuable essay on the blood of the insane, found that the blood of epileptics treated daily with ninety grains of the bromide for periods of over two, ten, and fifteen years had not been deteriorated by the prolonged use of this drug. I have, however, noticed that epileptics who have been long under this treatment are liable to have congestion of the bases and posterior portions of their lungs; this condition seldom passes further than congestion. Until I recognised the state and its cause, I frequently feared epileptics were liable to double pneumonia. After a succession of fits epileptics should be allowed to lie in bed, and during the period of epileptic excitement no sentimental opinion should prevent their seclusion; for the excitement in epileptic insanity differs from that in other forms—it is more easily acted on by outward causes, it subsides more quickly in solitude, and its characters render it more dangerous to the sufferer and those around him.

7. General paralysis. Few cases are more difficult to deal with during their asylum life, none more liable to accident; most of the grave accidents in asylums befall this class of patients. Aggressive habits, without power to make good their threats and actions, are a source of danger from fellow-patients; abusive words, filthy habits, and sudden attacks have often been, though they should not, a provocative of bad treatment from those paid to take care of them. During the period of excitement which in almost every case occurs in the course of this disease, greater attention is needed than in other forms of excitement. More impulsive actions, more utterly hazardous and unreasoning attempts at doing impossible feats, are perpetrated by general paralytics actuated by their delusions of power and grandeur, than we find during the excitement of other diseases. Realising the fatal issue of this disease, less compunction need be felt in keeping the patient under sedative influence during an acute paroxysm. During the five years ending 1884 I admitted forty general paralytics, and during that time thirty-six died without having sustained any grave injury during their asylum life. I must say I feel a source of danger past when

patients of this class lose the power of walking, and I do not regret when such patients become bedridden. I probably differ from many in thinking the habit of propping up weak general paralytics in wonderfully made chairs is not for their good or comfort; it is said to prevent bedsores, but patients at this stage should be kept clean in bed. With 547 patients, 40 of whom are bedridden while I write this, there is not a bedsore in the Carlisle Asylum.

8. In senile insanity I sum up the treatment in a sentence. Nursing, feeding, warmth, the judicious use of malt and spirituous liquids, and an occasional hypnotic. I use chloral with wine. Many public asylums have too few artificially heated single rooms, and night-nursing has not till lately been well enough attended to. Pneumonia and bronchitis, the result of a night's restlessness and exposure, frequently complicate such cases, and no doubt have ended many. A treatise could be written on any of the subjects I have touched on; but as I have to keep within limits, I conclude with some remarks on out-door exercise and treatment by sedatives and hypnotics.

Out-door exercise—I believe in this we have a natural remedial agent which in the majority of recent cases will subdue excitement and produce sleep, and at the same time re-establish the normal functions of different organs in the body, which too often are in abeyance during the stages of an attack of excitement. Maniacal excitement in chronic patients may be called into and kept in existence by injudicious asylum treatment. I have seen an asylum in which the female chronic element was for several years notably excited, where broken windows in the wards and black eyes among the patients were common, where noise in the daytime was incessant, and even night was made hideous by patients raving and hammering at their shutter, and where all attempts at making the airing-court into a flower-garden had failed owing to the destructiveness of the patients, and this in spite of the free use of many sedatives. By separate treatment of the excited, by exercise and employment, I have seen this changed, and a quietude by day and night scarcely credible take its place.

Sedative treatment.—During the five years ending 1878 I admitted 576 patients; 276, or 47 per cent., were suffering from maniacal excitement. Continuous sedatives were given for periods in 28, or 10.1 per cent. During the five years ending 1882, 677 patients were admitted; in 274, or 40.8 per cent., maniacal excitement was the prominent feature. Sedative treatment

was used in 17, or in 6.2 per cent. In the first five years I used sleep producers in 101 cases, or 36.1 per cent; in the next five years, in 50 cases, or in 18 per cent of the excited patients. I have gone carefully over my records, and my experience is that I give less sedative treatment than I did at one time, that I have to give fewer sleeping-draughts, that my patients do at least as well as they did, and that the asylum, as a whole, is quieter than it used to be. I think that if a patient is continuously treated by sedatives, and kept so under their influence as to keep quiet during an attack of acute excitement, such a case tends to run a longer course than if the excitement were allowed to expend itself. I have noted periodic cases treated with and without sedatives, and during several periods of excitement. I believe most sleep-producers given at night for any length of time produce an irritable mental state, and frequently stomachic discomfort. I am satisfied, however, that even extreme treatment by bromide of potassium, if it stop short of poisoning, produces no permanent bad effect, physically or mentally. I have been limited in my use of sedative drugs lately, principally having used bromide of potassium with tincture of hyoscyamus, and chloral with wine or spirits as an hypnotic. I have used counter-irritation to the head on several occasions without result. My experience of the use of hot baths at high temperatures in acute excitement has not been great, but it has made me question whether the result was worth the risk. I hope to hear from others their experience of sedatives, the Turkish bath, rest and massage, cold to the head, and other remedies which have proved efficacious. Had the results of my practice not been favourable, I should probably not have been so limited in my modes of treatment.—*British Medical Journal*, August 8, 1885.

RIEL'S MENTAL CONDITION.—The following interesting letter on this subject is from the *Toronto Evening Mail*, August 26, 1885:

The newspapers of the Dominion are now divided into two classes on the Riel question. They compose the hangists and the anti-hangists. Riel's mental condition has become of secondary interest, and his position has become subservient to party purposes. There are a few journals which have considered the question apart from political exigencies, and a goodly number of our fellow-countrymen are disposed to look at the matter in a judicial way, and to be even merciful, if any palliation can be

shown for Riel's conduct. The bloodthirsty cry for his life, because he has been the figurehead of a rebellion and has been the cause of loss of life or of property, is always the first impulse of an outraged people, and naturally so, when such dire effects come to our homes. We forget in our indignation that no civilized nation in this age hangs a rebel. We leave that for the barbarians to do. McKenzie, Papineau, T. D. McGee, Cartier and Rolph were arch-rebels, and were not only forgiven, but held seats in our parliament, and became honored citizens. The Fenians made inroads upon our country, and not only devastated parts of it, but also shed the blood of some of our sons. Not a captured Fenian was hung, but after a few years of imprisonment they were liberated, and sent home with money in their pockets. The United States lost over half a million of the best men of the people, and had whole States pillaged and financially ruined by invading armies during four long years of bloodshed. At the close of this fratricidal conflict not a rebel was punished, from Jefferson Davis downwards to the rank and file. Not only so, but ex-rebels are now members of Cleveland's Cabinet. This magnanimity was creditable to that great people, and did much to heal the breach which existed between the North and South.

Riel executed will be a martyr, but Riel imprisoned for life will only be a lunatic or a criminal. The sober second thought of our people will prevail in urging that no legal blood-spilling can accomplish any good. A rebellion of this kind, in which blood is shed, is not murder, as there is no "malice aforethought" against persons in the uprising.

Let us now take the personal history of Riel and see what it will reveal of the mental workings of this man. He has now living a semi-imbecile mother with a religious bias of mind. He had an ill-balanced father, whose hot passions bordered on insanity. Riel was educated for a priest, but so strange was his conduct that the intention was abandoned. His eccentric conduct, mixed with cleverness, was always the subject of comment among his acquaintances. He aspired to be a great leader, and thought himself a sort of coming Napoleon, or possibly the centre of a new religious movement which would supersede the existing Papal power. He was full of impulses and unstable in character, at one time seeking the ordinances of the Roman Catholic Church and at another spurning its priests and rites; full of plans, moods and freaks in which there was no permanence,

and for which there were no adequate motives. This is the record of his whole life. Dreading a competitor for public favor, and as a consequence a rival, on the impulse he shot Scott in the rebellion of 1870. He became frenzied and maniacal when anyone attempted to plead for poor Scott's life.

Between 1870 and 1878, he had been incarcerated in three asylums and duly certified to be insane by medical men—once in an asylum at Washington, U. S., once at Longue Pointe Asylum Montreal, and once at Beauport Asylum, Quebec. At these asylums he was at times maniacal, and had the delusion which guided all his actions—that he was the coming potentate of the age. Round this central idea clustered many minor ones of a like nature. Like many of the insane he had intermissions of recovery, and at these times was competent to transact ordinary business and was wholly responsible.

During the recent rebellion there is no evidence to show that Riel was not sane up to the Duck lake fight. His speeches, his letters and his conduct point to his responsibility up to this time. The excitement was too much for his unstable brain, and as a consequence he broke out into paroxysms of religious mania quite consistent with his personal history. The Metis who were in all the fights say he was at these times only the nominal head of the movement. He did no fighting, planned no campaign, and exercised no control over the Indian and half-breed rebels. Dumont and Dumais were the real leaders and fighters. These captains found it convenient to use Riel because his fanatical and religious appeals influenced their frenzied, ignorant and deluded followers. Riel went about with a crucifix held aloft praying and calling upon the Trinity to assist them. He was incapable of suggesting or carrying out any practical suggestions. When the different fights were going on, he shouted, stamped, gesticulated and prayed "like one possessed," but all his efforts began and ended with these ravings. Anyone who has read his "diary" as written about this time, can see nothing but insane rubbish in his visions, revelations, and prophecies from beginning to end. The evidence of the witnesses both for the Crown and the defence testify to these mental twists in his nature.

A few might be cited out of the many stated. At a wedding which took place at Batoche last April, Riel set apart on a chair a plate full of meat, which he said was for Jesus Christ, who was to be present. Nolin, a cousin of his, and who was a witness against him, said that at one interview he had with Riel, he set an empty chair between them, saying it was for Christ, who was

to be present. This witness is an intelligent man and thought Riel "acted like a fool." Last spring, Riel, ever inconsistent, asked the mission priests to allow him the usual privileges of a communicant. The accomplished Father André, the superior of the Oblate Fathers, testified that he called a meeting of all the priests at the mission to consult about Riel's proposal, and their conclusion was that Riel was not in a fit mental state to permit of his partaking of church ordinances. Father André said in court that the prisoner acted like two men—one shrewd, intelligent and cunning, and the other was a maniac with no sense. He said the least opposition to his plans acted "like a red rag on a bull." This priest was strongly opposed to the rebellion, as well as were his colleagues. Their lives were always in jeopardy because of this man's freaks. The prisoner told one of the medical witnesses that he was a prophet, and could foretell future events especially the coming verdict of the jury. In this respect he turned out a false prophet. This has not shaken his faith in his powers as a seer, as he is still prophesying and will to the end of the chapter. Nothing will shake the belief in himself and his powers. A number of the Crown witnesses testified to the prisoner's cunning and general intelligence at times, but they thought him a queer acting man on the whole.

Take his own speeches at the trial, and in the midst of many clever and sarcastic things said there crop out his delusions of his yet becoming the centre of a great movement. This idea of greatness and unbounded power peoples our lunatic asylums with kings, queens and princes. Take Riel's nonsensical plan of establishing a national heptarchy in the North West, of which he would be supreme ruler in spite of Canadian or British power. Take his idea of locating the Papal See at St. Boniface and of dethroning the Pope of Rome. Take his statement (told by a Crown witness) that when he felt a movement in his body it was made direct by the spirit of God. Take his vehement denials that he is insane—because it would take away from his presumed greatness—although he knew that his life would depend on the success of that plea. Take his physical condition and his actions, so characteristic of the insane, and which cannot be simulated nor described in words, and it is evident that Riel is either insane or is a most consummate schemer. Anyone who has closely followed the history of this unfortunate man must acknowledge that were he an obscure person, and not the centre of two rebellions, these and kindred fears would be sufficient to consign him to any asylum in Christendom.

The medical testimony was purely negative, as the experts had neither time nor opportunity to determine beyond controversy whether the prisoner was a deceiver or not. The chief Crown witness had only examined him for half an hour, and although in that brief time he saw nothing insane, yet he was not prepared to say he was not insane. Another medical witness stated that, assuming the prisoner was not scheming, and accepting the truthfulness of the statements of the various witnesses, he had no doubt of Riel's insanity, but was not prepared to state it on his own cursory examination. He added that a man like Riel would need weeks of observation to make even an expert sure of his mental condition.

Taking all these alleged facts into consideration, and knowing how clever, intelligent, and cunning many lunatics are, it becomes a Christian public to pause and examine before this man suffers the extreme penalty of the law. We are not to judge of him from the sad mischief he has done, but of his responsibility in these acts. The politics which would not hesitate to urge the taking of life irrespective of those considerations, must lead to bloodguiltiness in any people, who could look upon such a course with complacency and without proper enquiry.

NEW NOMENCLATURE OF MENTAL DISEASES.—Dr. Henry Sutherland, lecturer on insanity at the Westminster Hospital, makes the following remarks (*British Medical Journal*, August 8, 1885), upon the Section of Mental Diseases in the New Nomenclature of the Royal College of Physicians :

In order to estimate correctly the value of this new classification of mental diseases, it is necessary, for comparison's sake, to refer briefly to the original subdivisions of these disorders, published by the College of Physicians in 1869, and also to Skae's and Esquirol's classifications, to which, it is evident, the present one is indebted in no small degree.

The following table, where the order in which the diseases were arranged has been slightly altered, so as to bring those called by the same name side by side, will show at a glance the sources from whence the new classification has been derived.

College of Physicians, 1869.	College of Physicians, 1885.	Skæe.
Mania.	1. Insanity.	Idiopathic mania.
Melancholia.	2. Mania.	(a) Sthenic. (b) Asthenic.
Monomania.	3. Hypochondriasis.	
Dementia.	4. Melancholia.	
	5. Monomania,	
	6. Dementia, including ac- quired imbecility.	
General paralysis of the in- sane.	7. General paralysis of the insane.	General paralysis of the insane.
Idiocy. Imbecility.	8. Idiocy. Synonym, con- genital imbecility.	Idiocy } intellectual. Imbecility } moral.
Puerperal mania.	9. Puerperal insanity.	Mania of pregnancy.
(a) Connected with par- turbation.		Mania of child-bearing.
(b) Connected with lacta- tion.		Mania of lactation (and other forms of sexual insanity.)
	10. Epileptic insanity.	Epileptic mania.
	11. Insanity of puberty.	Mania of pubescence.
	12. Climacteric insanity.	Climacteric mania.
ESQUIROL.	13. Senile insanity.	Senile mania.
Mania.	14. Toxic insanity, from gout, alcohol, lead, etc.	Metastatic mania.
Lypemania (melancholia)	15. Variety (52). Delirium tremens.	Dipsomania. Delirium tremens.
Monomania.	16. Traumatic insanity.	Traumatic mania.
Dementia.	17. Insanity associated with obvious morbid change or changes in the brain.	Sunstroke mania.
Idiocy or imbecility.	18. Consecutive insanity from fevers, visceral in- flammations, etc.	Phthisical mania. Syphilitic mania.
	19. Cretinism.	
	20. Myxœdema.	
College of Physicians, 1869.		
Cretinism.		

Anyone who has studied the A B C of the subject, is aware that all classification must be founded, according to the divisions of mind supposed to be affected (as "emotional insanity"), or according to the mental symptoms (as "mania"), or according to the bodily conditions associated with the mental disturbance (as "traumatic insanity").

The Committee for Mental Diseases, very wisely discarding the first of these classifications as being unpractical, have arranged these disorders of the intellect under two important divisions; the first including forms of insanity arranged according to mental symptoms, the second according to the bodily conditions connected with them. This second division is further subdivided into those diseases of the mind dependent upon certain periods of life; those dependent upon external causes, and those dependent upon internal causes, which most probably arise from some disease of the nervous system.

If these diseases were arranged according to this subdivision, the list would read as follows.

Insanity Characterised by Mental Symptoms.—1, Insanity; 2, Mania; 3, Hypochondriasis; 4, Melancholia; 5, Monomania; 6, Dementia; 7, Idiocy; 8, General Paralysis. II. *Insanity Dependent upon Bodily Conditions.* (A) *Period of Life.*—9, Insanity of Puberty; 10, Puerperal Insanity; 11, Climacteric Insanity; 12, Senile Insanity. (B) *External Causes.*—13, Toxic Insanity; 14, Delirium Tremens; 15, Traumatic Insanity; 16, Consecutive Insanity; 17, Cretinism. (C) *Diseases of the Nervous System.*—18, Insanity of Brain-changes; 19, Epileptic Insanity; 20, Myxœdema.

Anyone seeing this classification for the first time, must at once come to the conclusion that in it, to conciliate the disciples both of Esquirol and of Skae, substantives, such as the word dementia, and adjectives, such as climacteric, have both been allowed a footing. An improvement has been made by substituting the term Insanity, for the term Mania, so often and so inappropriately used by Skae; and at least half a dozen of his forms of insanity due to sexual disturbance have been omitted.

Granting the necessity for those forms of insanity qualified by an adjective being included in the new classification, to satisfy scientific prejudice, it must be confessed that the Committee has performed its task with moderation and success. More especially would I direct attention to the two divisions "Insanity from Brain-change," and "Consecutive Insanity," as being both liberal in principle, and including a vast number of cases concerning whose etiology and pathology conflicting evidence might be adduced.

Modern research has necessitated the addition of the term "Myxœdema;" although much like its brother-disease, General Paralysis, the bodily symptoms are chiefly conspicuous.

Having said thus much in praise of this new classification, I may now turn a critical eye upon its deficiencies.

In the *Nomenclature of Diseases* of 1869, hypochondriasis was included under the head of "Functional Diseases of the Nervous System," and not, as at present, under "Disorders of the Intellect." Of course, the same word may bring different ideas to different minds; but to my thinking, there is nothing certifiable about hypochondriasis, pure and simple, as long as it does not glide into melancholia; and surely uncertifiable diseases ought not to find a place amongst mental diseases, if we wish classification to assist us in medico-legal questions.

The same remark applies to delirium tremens, a disease which often consigns the patient to an asylum, but which nevertheless in

itself does not constitute insanity until it passes either into mania *a potu* or chronic alcoholism.

I regret to see the term Monomania retained. Does it apply to one delusion or to one groove of delusions, or is it equivalent to exaltation?

Again, the would-be note of explanation attached to Dementia (I refer to the words "including acquired imbecility") is, I think, misleading. It would be far better to keep the term Imbecility for children, and Dementia for grown-up people, being consecutive or not upon other forms of insanity.

I may make a similar remark upon the explanation attached to Idiocy (I refer to the words "synonym, Congenital Imbecility." The writings of Drs. Down, Ireland and Beach, need only to be consulted for a moment to discover that idiocy is very frequently not congenital; as, for instance, when it is traumatic or when it succeeds scarlatina.

Cretinism and Myxœdema might surely have been briefly mentioned under the head of Mental Diseases, as well as being included amongst those "not classified."

With these few exceptions, the work has been well done. Both schools, the Somatic and the Mental, have had their claims recognised, and this is something.

There can be no doubt that the more simple a classification is, the better for those who are obliged to use it.

There are but four states of mind which can be considered abnormal; one of excitement, one of depression, one of exaltation, and one of fatuity, corresponding to the old terms of Esquirol, (1) Mania, (2) Melancholia, (3) Monomania (?), and (4) Dementia. Congenital Dementia should be called (5) Idiocy and non-congenital "Dementia" proper. To these five substantives, any adjective the wildest imagination might suggest could be easily added.

In addition, the word (5) "Insanity" should be kept, and also (7) "General Paralysis," a disease so strongly marked out by its characteristics as to render it incapable of being classified with ordinary mental disease.

Concerning Epilepsy, I am doubtful. It is an attendant's term for a certain class of cases; but, considering the fact that it accompanies all the seven forms mentioned above, in many cases it can scarcely be counted apart from them without making the terms overlap.

Mania, Melancholia, Exaltation, Dementia, Idiocy, and General Paralysis, combined with a free use of adjectives, ought to satisfy

the most pedantic scholar, and it is not certain that the one term "Insanity" would not be sufficient for all practical purposes.

TREPHINING FOR EPILEPSY.—A year ago last April, says the Indianapolis *Journal*, August 30, 1885, Dr. Fletcher reported a case to the Marion County Medical Society, of the permanent cure of epilepsy at the Indiana Hospital for the Insane, by removing an area of depressed bone an inch in diameter, which had been mashed down upon the brain by a fall from a house-top six years before. The lifting of this little tablet of bone made the patient a changed man. No camp-meeting conversion was ever more complete or effectual in the work of mental or moral reform. He no longer craved alcohol or narcotics; he lost his suicidal mania and murderous tendencies—no longer raved, fought or swore as in the six years preceding, but became as mild a mannered man as one would wish to see, and in the following September was sent to his home in LaPorte county completely cured.

A very similar case has just occurred at the hospital, the patient being a workman in the Eagle machine shops, of this city. Three years ago the patient was struck by a piece of iron, causing fracture and depression of the skull and unconsciousness for eight or ten days. After five months he resumed his work, but, in the course of the following year, became inattentive to business, irritable on the slightest annoyance, reckless and destructive, with gradual loss of memory. Upon July 30, he was admitted to the hospital, and came under Dr. Fletcher's care. External inspection showed little appearance of injury, but after cutting through the scalp a small depression was found in the bone. The membrane over the place was removed, when a loose splinter of bone about as large as a carpet tack was discovered. This was removed, with a portion of the skull three-fourths of an inch in length. The hemorrhage was so severe as to imperil the life of the patient. All the diseased bone was removed, the bleeding controlled, and in an hour after the effects of the anæsthetic had passed away, the patient expressed himself as feeling relieved from the unpleasant sensations that had annoyed him for the last three years. His appetite returned, and the following day he took, as he said, "the first good square meal he had enjoyed in three years." Five days after the operation he was discharged as cured.

THE MENTAL SYMPTOMS OF AORTIC REGURGITATION.—Mr. J. Harrington Douty, Senior Assistant Medical Officer to the Worcester County Asylum, England, has collected (*Lancet*, August 22, 1885,) an interesting series of observations showing the relations between incompetence of the aortic valves and insanity. We reproduce the following summary of the author's conclusions:

We find that of the fourteen cases no less than eleven are of mania; there is one of dementia, one of dementia with general paralysis, and one of melancholia. It is evident, therefore, that as far as this small collection of cases is concerned, no less than 78.5 per cent. are instances of the association of mania with aortic regurgitation. Of these eleven cases of mania no less than seven possessed very marked auditory and visual hallucinations. It seems probable that when fuller statistics are forthcoming upon this subject we shall arrive at a conclusion that the typical mental symptom of aortic regurgitation is a delusional mania, coupled with a condition of extreme instability of temperament. Patients whose aortic valves are incompetent, who are insane, are almost without exception of a touchy and excitable nature; very little upsets them; on the least provocation they will try to fight and struggle with their nurse to attain their own way, and are consequently very difficult and dangerous cases to nurse. As surely as one discovers an aortic regurgitant bruit, almost so surely is one told by the attendant of the obstinacy and irritable temper of the patient, the least thing causing a violent outburst of anger and abuse. Another very common and interesting accompaniment of this valvular lesion is the prevalence of hallucinations, whose cause, however, it is not difficult to find. General clinical observation tells us how any alteration in the state of the circulation may cause symptoms which, if persistent, would soon develop into delusions. The tinnitus resulting from an anæmic or congested brain; the clouds and obscurities complained of by the subject of grave heart lesions; the giddiness and buzzing complained of by the anæmic girl; the troublesome throbbing, humming, or whistling noises which are heard by a patient who suffers from nocturnal palpitation, are familiar points of interest. It is probable that the hallucinations resulting from aortic disease or any cause other than a local lesion of the ear or eye, are usually of central rather than of peripheral origin, for they are common in cases in which the organs of special sense have been disorganised for years. We know that usually the flow

of blood through the capillaries should be constant and equable. We may infer, therefore, that the blood flowing through the minute vessels of the internal ear, the retina, and the brain itself, does so in a fairly continuous stream in health; and that not only is the rate equable, but the pressure is also constant, or at any rate not subject to any sudden and frequent variations. Given, however, a grave reflux through aortic valves, and the converse of these conditions is established; the pressure in the capillaries becomes rhythmically various, increasing and diminishing with every cardiac systole and diastole. We know how acutely sensitive are the nervous centres and their peripheral arrangements of any departure from the normal. Such a condition of things, therefore, as that resulting from a grave aortic incompetence may produce a material interference with and perversion of the performance of their functions. It seems but natural, therefore, that, in the majority of cases associated with aortic reflux, hallucinations should be so common. Of course many things may occur to prevent the development of hallucination, and complications may arise to mask the evidence of their existence. They are prominent symptoms in 50 per cent. of the cases I have quoted. It is further noticeable that amongst the cases of mania several who had not hallucinations had exalted delusions and symptoms of general paralysis; this association of exaltation of idea and general paralysis with aortic regurgitation may be accidental, or it may result from the cardiac hypertrophy which naturally attends such lesions, and which has been described by Dr. Savage as productive of symptoms resembling those of general paralysis: One only of the fourteen cases was a simple dementia. The patient was listless, apathetic, and weak-minded, and had a feeble memory. Dr. Douglas Powell says he considers a certain amount of torpor and fatigue of mind to accompany many cases of aortic regurgitation, and to be relieved by the recumbent posture. This patient with dementia had, I should mention, hallucinations of sight, and would insist that she saw people walking about in the night. She assisted one of the night nurses, and one night declared she saw me go into one of the wards at two or three in the morning, calling the nurse's attention to the "Doctor going down the passage." The case of "melancholia cum stupore" was the direct result of acute rheumatism, from which the patient had just recovered before admission, and which left him emaciated, feeble and anæmic; consequently the melancholic prevailed over the maniacal

symptoms, which might have been prominent had his case been an uncomplicated one. It is interesting to note that heredity to insanity only existed in three out of the fourteen cases; sunstroke and drink were possible factors in two; in all the others no probable cause existed other than the heart lesion; and in the three with heredity one cannot say how far the heart disease was an exciting factor which developed the predisposing cause. How far the drink and sunstroke acted as causes in the two cases is also questionable; they neither of them recovered; one died, and the other is a chronic case. Had drink alone been answerable for the mania they might have recovered; atheroma and aortic disease, however, resulted from the drink, and hence death and chronicity. The typical form of insanity, then, resulting from aortic regurgitation is probably a delusional mania, frequently associated with very marked hallucinations and with a tendency to violent outburst of rage and anger. That in many such cases no exciting cause for the insanity can be found other than the heart lesion, is also evident from the fact that in twelve out of only fourteen cases this was so. The recovery rate for these fourteen cases of insanity is 0 per cent.; this fact points strongly to the importance of the heart mischief as a causative factor; the insanity is a symptom of an incurable organic lesion, and as such is also itself incurable. Rest as a therapeutical agent is more or less serviceable in these cases; a few have recovered for a brief period sufficiently to leave the asylum, but they soon returned. If we had access to their aortic valves, and could repair their lesion, then we might possibly alter our prognosis.

THE MANIA OF THE AGE.—Every age seems to have its intellectual nostrums—its poor, quack remedies by which society is to be purified, elevated, and purged from the degrading bits of humanity which still cling about it. To-day the universal remedy for all ills that flesh is heir to, whether mental or physical, is supplied by “work.” It has always been the fashion to revile one’s age; and we shall only be following a precedent, sanctified by the example of hundreds of generations of men, when we remark that the pose of “work” is little less funny than was that serio-comic distress of mind and laborious perception of “the vanity of all things” that the true disciple of the Byronic school gradually achieved. But Byron’s follower had this undoubted advantage over the work-oppressed creature

of to-day, in that the modernized system of Ecclesiastes provided a safety valve in a sort of traditional right to debauch, whereas nowadays our poor workworm gets no respite from the service of his god. It is often said that in these days "the schoolmaster is abroad," and one is sometimes tempted to wish that he really were, and that he would stop there for a very long time, so that his mental health might be quite restored, and that the poor man-worms in the shape of boys and youths might have some respite from those who heap up examination upon examination, perverting and narrowing the human instincts into a formula that reduces the object of life to the attainment of a series of certificates, and projects the shadow of the grindstone over all that men do. Laborious and complicated systems of education, a multiplication of dreary horizons of past or future examinations, poison and dull the creative faculties, and are as a canker at the root of spontaneity and delight in invention, associating in the mind all expression of thought in words or form with the tedious work done in the class room. Fools of to-day are equipped, too, with a power and capacity for foolishness unknown in days when knowledge was sought by those only who loved it for its own sake, and who perhaps generally knew how to use it.

The trail of work, the duty of expending ourselves and getting as much out of life as possible, is over us all. Would we indulge in games for recreation, it is our duty to play them as well as we possibly can, and should we neglect to do so we are convinced that we are thereby sacrificing so much of those possibilities that our capacities for development might afford. Thus one after another we reduce all social games to what lawn tennis has now become for the average man or woman, an "abomination of desolation." Can we not see in this springtime of socialism that it is a sin against society to develop individual skill at the expense of the happiness of the community, and that the too-cunning lawn-tennis player, along with all others who have the self-development craze abnormally developed, should be hunted out into the wilds of the new Empire of the Congo, or to some other safe place, where they may have leisure to reflect upon their sinful want of the sense of the right proportion of the individual in society? A bygone generation was in the habit of sighing for rest, but now it is the habit to sigh for more work and greater responsibilities. Were there to arise a new St. John on the Isle of Dogs, he would construct as his heaven a sort of glorified London, in which the smoke should be miraculously

spirited down a big smoke drain into the Thames, so that no fogs might enter his paradise, and where no atmospheric effects should interfere with work and business. There, too, he would promise ceaseless activity and eternal freedom from the curse of sleep as the attractive conditions of the ideal life, and would look forward to the possibilities of being allowed to govern or make experiments on the inhabitant of other worlds as a reward for having got as much as possible out of life in this present existence. This latter occupation would perhaps be the final work for a capable and well-developed man.

In this renaissance of what might be termed the "fall of man," the daughters of Eve have resolved at all cost to eat of the fruit of the tree of the knowledge of good and evil, and they, too, in company with men, are running a break-neck race along the road of self-development. Indeed, some of them have got so near their "ultimate expression" that they can apparently afford to gaze calmly back as they remark axiomatically that "none should obtain praise for work, for it is a necessary condition of happiness." Again, the spiritually minded young woman who seems about to try and find rest in devotion to, and strict observance of, the ordinances of the Church, is nowadays recommended by her advanced sisters a course of work as a cure for her maudlin tendencies, instead of being treated to a prescription of balls and parties. Even the mystically respectable trinity of "Banking, Beer, and Blood" can not resist the influences of work in the air, but must needs cudgel its brains to shine intellectually or artistically.

No doubt the tendency to glorify all those who work or who get their living by their wits brings with it many advantages, but the struggle among those who aspire to be glorified is a grimly comic one. Most aspirants for honor in the new social heaven, either through a morbid eagerness to excel or a dread lest they should be superseded by others, live in a chronic state of over-work, which of itself precludes the possibility of their doing the best work of which they are capable. Life has got to be little more than a game in which one *dares* not stop making points. The marks of the schoolroom have only been exchanged for other symbols—pounds sterling, position, fashion—all of which are carefully reckoned up in the Great Book of "Notoriety." Man seems to be made for work, and not work for the betterment of mankind.—*Pall Mall Gazette*, June, 1885.

BOOK NOTICES AND REVIEWS.

A System of Practical Medicine by American Authors. Volume II. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine in the University of Pennsylvania. Philadelphia: Lea Brothers & Co., 1885.

The second volume of Pepper's System of Practical Medicine comes to us in clear, handsome type, and lays before us a series of articles from the pens of men so well known that they invite careful attention. Dr. Pepper aims to present to the medical profession the ablest work and the ripest thought of the time. How well he is succeeding, the present volume, like its predecessor, bears ample testimony. The opening pages of Volume II are given up to the continuation of the discussion of the so-called General Diseases, and form, practically, the conclusion of Volume I. The articles on Rheumatism and Diabetes Mellitus are especially worthy of note, and present a careful review of the most recent developments in the clinical study of these distressing maladies.

The discussion of the Diseases of the Digestive System is next taken up, and our attention is at once arrested by such names as Alonzo Clark, Roberts Bartholow, J. Solis Cohen, and others.

An exceedingly interesting article on Peritonitis is from the pen of the venerable Dr. Clark. More than forty years ago Dr. Clark introduced to the profession the opium treatment for this painful and dangerous disease which, until then, had been uniformly fatal. "In 1832," says Dr. Clark, "I began to visit hospitals as a medical student, and for eight years, at home or abroad, was almost a daily attendant. The number

of recoveries of those that I saw in that time can be counted on the fingers of one hand." In strong contrast to this alarming mortality stand the results obtained by the heroic use of opium. Of the first nine cases so treated, eight recovered, and Dr. Clark became sponsor for a method of treatment that has since spread over the civilized world.

Bartholow has presented a comprehensive and admirable discussion of the diseases of the liver, and the articles by Dr. Welch on Gastric Ulcer, Cancer and Hemorrhage are rich in pathology and in every way worthy of their distinguished author. It is especially gratifying to find this subject occupying such a prominent place in a work on general medicine, for, at the present time no one can question that an accurate knowledge of pathology must form the permanent foundation for the rational treatment of disease.

There is much more in this volume on which we might make favorable comment, but our limited space compels us to content ourselves with this brief mention. Its merits alone are quite sufficient to win for it prompt recognition and a widespread welcome.

Hand-book for the Instruction of Attendants on the Insane.

Prepared by a Sub-Committee of the Medico-Psychological Association appointed at a Branch Meeting held in Glasgow on the 21st of February, 1884. London: Baillière, Tindall & Cox, 20 King William Street, Strand, 1885.

The authors of the manual set forth its aims in the following introduction: "This hand-book has been prepared in the hope of helping attendants on the insane to a due understanding of the work in which they are engaged. It is sought to give them such simple notions of the body and mind in health and disease, such instructions for the management of those

maladies with which they are usually brought in contact, and such rules for their guidance in matters of every day experience, as will enable them to do their work with greater intelligence and watchfulness. It is designed that these instructions should aid attendants to carry out the orders of the physicians; but it is to be distinctly understood that in no case is anything contained in this book to over-ride the special rules of any institution, or special orders in regard to any individual case."

That some book on this subject was needed can not well be doubted, and perhaps the reason that no one has ventured on earlier authorship in a systematic manner is to be found in the difficulties which the task involved. This difficulty has been attested by the opposition which the venture encountered in its preparation, and it is an open secret that many sections of the manual were vehemently fought in committee. Be this as it may, we can not but commend the manner in which the sub-committee has on the whole performed its task, and it would not be invidious to make special mention of the convener, Dr. A. Campbell Clark, the enterprising superintendent of the Glasgow District Asylum, who in his share of the work has shown once more the keen interest he feels in everything pertaining to the training of attendants.

The book has sixty-five octavo pages, and is divided into five chapters, namely: I, The Body, its general functions and disorders; II, The Nursing of the Sick; III, Mind, and its disorders; IV, The Care of the Insane; V, The General Duties of Attendants. Shortcomings there doubtless are, but these are trifling compared with its merits. The fact that 3,000 copies have already been sold, thus exhausting the first edition, is sufficient evidence of the favor with which

the book has been received. A second and improved edition will doubtless be in the market before long. In these days when efforts are making at home and abroad to raise the status of attendants on the insane, this hand-book will be a helpful means to the attainment of that desirable end.

Lectures on the Diagnosis of Diseases of the Brain. By W. R. GOWERS, M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College; Physician to University College Hospital and the National Hospital for the Paralyzed and Epileptic. Philadelphia: P. Blakiston, Son & Co., 1885.

This little book, as its title announces, consists of a course of lectures delivered by the author before the students of a London medical school, and, although of unpretentious size, it grapples with one of the most difficult subjects that confront the general practitioner, a subject which "transcends in complexity, and perhaps exceeds in interest, all other problems in practical medicine," viz., the diagnosis of the diseases of the brain.

Dr. Gowers is working in a field already long occupied by such eminent men as Lockhart Clarke, Meynert, Foville and Ferrier, whose united labors "have brought to light an immense number of facts and have built up a large mass of knowledge." The plan of the work, beginning with the anatomy from a physiological stand-point, and then proceeding to the morbid conditions with their subjective and objective manifestations, is logical and commendatory, but it is to be regretted that the author has devoted so much space to theoretical deductions from experimental physiology. There is often an unfortunate lack of that practical instruction which we should expect from a man of his extensive hospital experience. For example, in

reference to the differential diagnosis of apoplexy, he makes but casual mention of temperature and dismisses reflex action in the following words: "In coma, the reflex action in the limbs is usually lessened and often lost."

The chapter on affections of speech is interesting and instructive. The writer maintains that "the left hemisphere has by no means a monopoly of speech function. The right hemisphere contains structures of similar position and similar connections. These structures can supplement those in the left hemisphere." In conclusion we may add that while we find little that is essentially new, and are not infrequently embarrassed by ambiguities that are somewhat puzzling and annoying, the book as a whole is a valuable addition to the literature of cerebral localization and disease, and a worthy companion to the author's well-known volume on the Diagnosis of Diseases of the Spinal Cord.

REVIEW OF ASYLUM REPORTS.

CANADA:

Report of the Medical Superintendent of the Provincial Lunatic Asylum of St. John, N. B., for the year 1884.

This is the 37th annual report of this Institution, and covers the year 1884, from January 1st to December 31st. The statistics are:

Number of patients, January 1, male	195,	female	172.
Admitted during the year,.....	66,	"	57.
Discharged recovered,.....	22,	"	18.
Discharged improved,.....	16,	"	13.
Discharged unimproved,.....	1,	"	4.
Died,.....	24,	"	12.
Remaining December 31st,.....	198,	"	182.

It will be seen that the whole number under treatment was 490, and of the 380 remaining, it was "estimated" that 47 only were "curable" cases, and the rest incurable. In the 10 years past, the number under 20 years of age at the date of first attack was 181 out of a total of 1,249, and under 40 was 875. The nativity of 941 was in the Dominion of Canada. As to civil condition, 682 of the whole number were "single" persons. Of the total for the year 1884, being 490, 453 were supported by the Province.

In the table of causation we observe that "Heredity with no other cause assigned" is credited with 110 cases, while 24 are set down to "religious excitement," and several to such causes as "disappointed affections," "undue excitement," "nostalgia," "inherent evil affinity," "misplaced confidence," "abandonment," "illness," "poverty and vagrancy" and "Spiritualism." It might be inquired whether "causes" like these might not sometimes be *effects*, or concomitants, or symptoms of the *disease* of insanity.

Of the 123 admissions 74 were cases of "first attack," and of the 40 recoveries, *all* were of less than a year's duration. Of the recoveries, nine were cases of melancholia, the rest of some form of mania. As to causation in the cases recovered, 14 out of 40 are set down to "Ill health or dissipation with heredity," four to intemperance and six to "defective nervous organization." Of the 36 deaths, 10 were from phthisis, or tuberculosis and five from epilepsy, one being ascribed to *autocheiria* [why not "Suicide?"] We are somewhat surprised to see that *four* of those who died have their insanity dated "from birth."

Referring to previous reports for remarks upon his statistical tables, Dr. Steeves at once enters upon the question how to provide for the "accumulating chronic

and incurable insane?" The question of separating the two classes of acute and chronic cases, he admits is still undecided by the majority of medical men, but the increase of taxation, he thinks must decide it, inasmuch as in his own words, "In this Province the cost of maintaining the insane, where it is done more economically than anywhere else, absorbs one-fifteenth of the entire revenue." The accumulation of chronic cases has reached a point he thinks, at which they constitute seven-eighths of the entire insane population.

He therefore proceeds at some length to advocate the plan already adopted in many places, a system of detached groups of cottages or pavilions of cheaper construction in the vicinity of the main hospital, with a large farm attached and shops for the various trades. He quotes a number of authorities who have tried the experiment, such as Dr. Clouston, Dr. Godding, Dr. Chapin, and the Asylums at Ward's and Hart's Island, Willard, Cranston, R. I., Middletown, Conn., Kankakee, and several in England. It is substantially the plan advocated by Dr. Smith, the Commissioner in Lunacy of this State, and asked for by the Board of Managers of the State Hospital at Poughkeepsie. Of course, all our State hospitals have farms attached and outdoor labor is encouraged to as great an extent as is allowable for *sick men*, which the insane as a rule are. The feature of difference is, the provision of a system of outhouses, or "one story pavilions" in scattered groups, which must make such matters as supervision, heating, cooking, feeding and laundry, much more difficult and expensive. "Cheaper construction" in plant might soon be neutralized by a higher or more elaborate scale of current expense. And if many were so happily situated in a "wooden country" as Dr. Steeves, where the supply of such fuel bears some proportion to the

severity of the climate, as he proposes to warm his cottage with *wood stoves*, the exigencies of keeping rooms comfortable might, not only furnish considerable occupation for patients, but also plenty of "risks," not "first-class," to both fire and life-insurance companies. It is a little suggestive how soon the "new departure" at Kankakee resulted in a casualty of this kind. Certainly, under the best system of management, this is the one most imminent danger of all insane hospitals to be guarded against, as the experience of nearly all our asylums testifies.

What Dr. Steeves says of the Criminal Insane and the distinction in Canadian law which excludes from the Criminal Asylum all but actual convicts, we fully agree with.

Seventeenth Annual Report of the Inspector of Prisons and Public Charities on the Asylums for the Insane, and the Asylum for Idiots of the Province of Ontario, for the year ending 30th September, 1884. Toronto.

The Inspector reports that the whole number of insane, idiotic and feeble minded persons known to his department as residing within the Province of Ontario at the close of the year, was 3,127, or 180 more than in the preceding year. The whole number of insane in actual residence at the four asylums of London, Hamilton, Toronto and Kingston had increased from 2,594 in 1883 to 2,671 in 1884, besides 51 lunatics still awaiting vacancies. There were 33 insane convicts in the Kingston Penitentiary for Insane Criminals, and 76 insane and idiotic in the common jails. The number of admissions to the four asylums was 508 as against 543 the previous year, but the admissions are limited by the number of vacancies. The Inspector does not tabulate the discharges, but

states that the percentages of cures to admissions are, for the Toronto Asylum, 34.50; London, 30; Kingston, 33.03, and Hamilton 48.62, which last is higher than ever before reported.

Under the system of "probational discharges," the following results are given: Whole number sent home on probation, 149; discharged recovered, 73; improved, 18; died, 1; returned to asylums, 28; still out, 29. The Inspector thinks the ratio of insanity to the population is not increasing; but as in the statistics, idiots and feeble minded persons are included, it is not easy to determine this question.

The Inspector highly commends the system of probational leave of absence, as a positive aid to ultimate recovery. He also very properly urges the application of the law as regards inspection and supervisions to Private Asylums, of which there is one example in the Province, the "Homewood Retreat" at Guelph, of which the Inspector speaks in high terms, as the only one affording special treatment to cases of inebriety and the opium habit, to which he would add epilepsy, hysteria, chorea, and others not so readily certified as insane.

Dr. Bucke's report of the London Asylum for the year ending September 30, 1884, shows admissions 132; whole number under treatment 1,027—men 520, women 507; remaining at end of year 450 men, 457 women. Discharged recovered, 39; improved, 20; unimproved, 7; not insane, 1; died, 50; eloped, 2; transferred, 1. One death was a suicide while out on probation.

Dr. Bucke professes to have made certain discoveries in regard to the use, or rather the disuse of alcohol, which perhaps may be relegated to the sphere of individual idiosyncrasy. He is right to push the factor of manual labor as far as patients' personal comfort

and right will admit, but we hope he will have no further occasion to explain why the maintenance account of his institution has been increasing for some years. No one advocates the use of alcohol, or any other therapeutic or hygienic instrumentality, except where necessary. We observe that of his recoveries none were admitted previous to March, 1882; and of 907 patients over 800 are chronics, 309 of them "in residence for over ten years."

Dr. Clark reports for the Toronto Asylum 143 admissions, of which 49 recovered; total under treatment 846, deaths 52; remaining in asylum, September 30, 703. Of 16 sent home on probation, all except one recovered. On the subject of work, Dr. Clark says: "Last year our average population was 703. Out of this number 214 were regular workers; this made an average of nearly $30\frac{1}{2}$ per cent. Private patients do little work for the asylum, so it is only fair to deduct 274 of this class, making a ratio of about $45\frac{1}{2}$ per cent. of our free patients who were engaged in manual labor of one kind or another. At the beginning of 1884 we did the most of our indoor work in the wards, and have done so ever since. It is found that the presence of working patients among those who formerly performed no work, had an imitative and stimulating effect upon the latter class. The result has been very satisfactory, and shows that 456 patients have been thus employed during the current year, making 90 per cent. of the free patients, or more than double of the number in the previous year."

Dr. Metcalf, whose sad death is noticed elsewhere, makes for the Kingston Asylum what proves to be his last report: Admissions, 132; under treatment, 581; discharged, 53; died, 25; eloped, 3. Remaining—men, 253; women, 247. The Doctor justly complains of the

transfer of prisoners from the Kingston Penitentiary to the asylum, there being 25 such cases, which properly belong to the Criminal Asylum. Dr. Metcalf, while not fanatical on the subject of restraint, shows how it can be reduced to *nil* by sufficient amusements, employment, diversion of mind, &c.

Dr. Wallace reports for the Hamilton Asylum, 109 admissions, of which 49 were from the county jails; under treatment, 656; discharged recovered, 53; improved, 6; unimproved, 3; died, 28; escaped, 5; remaining, September 30, 561—265 men and 296 women. The residence of those recovered was from $3\frac{1}{4}$ years to 3 months. Number out on probation 40, of whom 29 recovered, 10 returned.

This asylum has fortunately obtained a new east building, and is to have another to the west, which will greatly improve its facilities.

NOTES FROM ABROAD.

[*From our British Correspondent.*]

PSYCHOLOGICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION.—The programme this year was a very poor one. Cardiff is not popular as a holiday resort; it is not easy of access, and the turn out of visitors was very small. Dr. Yellowlees filled the presidential chair, and gave an eloquent address on the Causes and Prevention of Insanity. The subject was certainly worthy of a great effort, but the attitude taken in regard to the treatment of it was scarcely in keeping with the reputation of the president. Cast in a deep religio-moralistic mould it was not calculated to find ready acceptance among an audience which should at the time and place be keenly scientific. The address is nevertheless extremely interesting, giving as it were in perspective many views on a variety of problems relative to the subject of the address. It contains much debatable matter, and but for the absurd custom (which is supposed to be a courtesy) of not discussing the address, some new things might have come to light had the subject been thoroughly digested.

Dr. Campbell, of Carlisle, a famous warrior in psychological fields, provided a treat in the form of a paper on the Treatment of Maniacal Excitement. He infused his subject strongly with his own experience, and gave a clever, forcible and argumentative paper. He is strongly in favor of bromide treatment in epileptic excitement, and others expressed themselves as strongly against it. He traversed a wide field, and his paper is worthy of perusal as being in many respects illustrative of English practice.

The furore over lunacy legislation has not ceased. Dr. Hack Tuke had a paper on the subject prepared with his usual care, and expressing many sensible views, such as that the number of commissioners should be increased, but containing many views liable to contention. Among psychologists there is the wildest divergence of opinion on the subject. Such being the case what can our legislators think of us?

Recent Lunacy Trials.—The mania possessed by discharged or recovered lunatics for dragging medical men who certified them into court is very much on the increase. A new means has thus been discovered of completely wrecking the prospects in life of a medical man on the very slenderest evidence. It is no secret that the victims of some recent trials of this kind are literally beggared by the actions raised against them. The latest case is that of Neaves vs. Hatherly. The plaintiff is an old maid with ill-guided impulses. She had conceived strange delusions regarding the inmates of her mother's house, such as that her mother's brain was being softened by ether; that her brother and the servants were helpless tools in the hands of Jesuits; that he had improper intimacy with the nurse who under the influence of Jesuits was poisoning his child. As a result of such a disquieting condition of mind she became an intolerable nuisance to every individual in the household, both by day and night, insisting on entering bedrooms at night, inspecting underneath the servants' beds for Jesuits of male persuasion, and performing various other outrageous acts.

Confinement in an asylum was at last determined on. Mr. Hatherly, the family medical man, having known her for years, had no difficulty in writing a thorough-going substantial certificate, but he neither initiated

proceedings nor had aught else to do with the matter. The judge charged the jury wisely; but with remarkable stupidity the jury found, (1), that Miss Neaves was not insane when so certified; but, (2), that Mr. Hatherly was not guilty of negligence in granting a certificate. Comment is needless.

A LETTER FROM LONDON.

We have received the following notes from London from Dr. C. W. Pilgrim, of the New York State Lunatic Asylum:

THE HOLLOWAY SANITORIUM.—The Holloway Sanatorium, St. Ann's Heath, Virginia Water, about twenty miles from London, was opened by the Prince of Wales on the 15th of June.

This institution is intended for the care and treatment of the insane of the middle class, and the rates will range from twenty-five shillings (\$6.25) per week upwards, according to the requirements of the case. In special cases the terms may be still further reduced by the committee, or patients without means may even be received gratuitously where there is a fair prospect of cure. On the other hand patients paying a higher rate may have private rooms and special attendants. There are also a few cottages on the grounds for the use of patients whose friends are able and willing to pay for such accommodation.

This Sanatorium takes its name from its founder, Mr. Thomas Holloway, but the credit of its inception is due to Lord Shaftesbury, to whom the English people and the world in general, owe so much. Nearly a quarter of a century ago Lord Shaftesbury propounded a scheme for founding a benevolent asylum for the mentally afflicted of the middle class, but it unfortunately fell through for lack of financial support. He,

however, never ceased to agitate the question whenever an opportunity offered, and in a speech in Freemasons' Hall, in the early part of 1881, he said that while the rich were provided for in private asylums and the very poor in county asylums, there was no adequate provision for the insane of the middle class. To all above the pauper class, to whom insanity had come, there were three classes of asylums open—the single house for single patients, the licensed house for a number of patients, and the registered hospital. The two former, he said, were objectionable on account of the expense, and he strongly advocated the claims of the registered hospital founded by private contributions, and urged upon his hearers more benevolence in that direction. The seed then sown did not fall on barren ground. Mr. Holloway, who had amassed an immense fortune, was desirous of devoting a part of it to some charitable work which would not pauperize the recipients, and Lord Shaftesbury's scheme commended itself to his mind. He thereupon resolved to found for the accommodation of the insane of the middle class, an asylum which should be self-supporting. A charming site of twenty acres of land was purchased at Virginia Water, within a mile of Windsor Great Park, and the sum of £300,000 was set aside for the laying out of the grounds and the erection and furnishing of the buildings. Although the institution has been formally opened, only a small portion of the building is ready for the reception of patients. More than the original sum has already been expended, and it is estimated that when the building is furnished throughout and ready for occupancy, the cost per bed will not be far short of £3,000.

Mr. Holloway died in 1883, but his brother-in-law, Mr. George Martin Holloway has carried on the work.

He travelled extensively throughout Europe and the United States for the purpose of visiting and enquiring into the management of similar institutions, and has spared no pains to make the Sanatorium what its founder would have desired.

The building is situated on an eminence and commands fine views of the surrounding country. It is made of red brick with trimmings of Portland stone, and is in the style of the early English Renaissance. It may be described as a quadrangle, of which the principal front is 530 feet in length and one half as much in depth. In front is a projection consisting of the great hall, and immediately behind this and over the granite stair case, is a square tower, rising to the height of 145 feet, with a slate roof and pinnacles at the corners. The wings of the buildings are broken up by high gables and the separate suites of apartments are isolated from each other except by a general communicating corridor. As social life has been the object sought for, the sleeping apartments, with a few exceptions, are on the upper floors, whilst the ground floor is devoted to sitting rooms which are elegantly frescoed and furnished. Works of art adorn the walls, richly upholstered chairs and couches are on every hand, heavy carpets cover the floors, plants are so numerous that one almost imagines himself in a tropical garden, while roses and stained glass give the whole place an appearance of elegance and splendour which must be seen to be appreciated. It is truly an *asylum de luxe*.

The parts upon which the greatest amount of expenditure has been lavished are the entrance hall, the recreation room and the dining hall. The entrance hall is wide, arched and handsomely decorated, and has an imposing stair case, with massive marble handrails,

leading to the recreation room, which is 80 feet long, 40 feet wide and 60 feet high. It is well lighted by stained glass windows, and no spot on the walls or roof is left undecorated. A series of full length portraits of celebrated persons are let into the walls. Among them are those of the Queen, the Prince and Princess of Wales, Lord Nelson, Lord Beaconsfield, the founder and his wife, Mr. Martin Holloway, and others. The dining hall rivals the recreation room in elegance. It is 54 feet long, 32 feet wide and 40 feet high, with an open timber roof, and its walls are completely covered with decorative paintings. The flooring in both the dining hall and recreation room is of square oak blocks. All this portion of the building is lighted by electricity.

The chapel is situated about one hundred yards from the main building and is 92 feet long, 35 feet wide and 55 feet high. The floor is of black and white marble and the ceiling is of oak. At the entrance are two vestries with a spacious organ-loft above. The whole building is more like the house of an aristocratic and wealthy club than an asylum, and as Dr. Philipps says in his circular, "The apartments are unparalleled for their magnificence and elaborate decoration."

As is well known, Mr. Holloway's great fortune was made by selling pills and ointments to a credulous public, and, while standing in the midst of all this splendour, the thought arises that there is a sort of ironical humour, not to say retributive justice, in the fact that so much of it has been devoted to the erection of a hospital for the care of the insane.

FATAL ASSAULT ON DR. METCALF.

Not many months have elapsed since we had occasion to chronicle desperate assaults made by homicidal madmen on two English Superintendents, and these had followed, at short intervals, on similar acts of violence at home and on the continent of Europe. In this country the States of New York and Michigan have each been called upon to mourn the loss of asylum physicians, killed while at their posts of duty, and other States have narrowly escaped a like misfortune. Now the tears of Canada are shed over the grave just closed of one of her ablest superintendents who died by violence at the hands of one of his patients. The details of the tragedy are as follows:

On the morning of the 13th August, Dr. Metcalf and his assistant, Dr. Clarke, were making their usual round through the wards of the Rockwood Asylum, and had reached the new cottage, where the open door system is in force. As they passed along one of the halls a patient, named Patrick Maloney, who was standing in a doorway, suddenly wheeled and rushed at Dr. Metcalf, striking him a violent blow in the abdomen. Dr. Clarke felt satisfied that Maloney's assault was intended to be a serious one, though he did not at first realize that the patient was armed with a knife. Dr. Metcalf walked off in the direction of a sitting-room, while Maloney and Dr. Clarke struggled for some time in the hall, Maloney trying without success to turn upon the doctor with the knife. Seeing Dr. Metcalf was about to fall, Dr. Clarke threw Maloney from him, and the patient darted through the doorway as rapidly as possible. Dr. Clarke then carried the superintendent in his arms to the main building, a distance of about

one hundred and fifty yards. Telephonic messages were at once sent summoning other medical aid. Dr. Lavell and other Kingston physicians were promptly at hand, and everything possible was done to make the sufferer comfortable. A very serious wound was found in the lower part of the left side of the abdomen, through which nearly the whole of the intestines protruded. These, however, had not been materially injured. There was also a second, but insignificant cut in the back of the thigh. Dr. Metcalf was remarkably calm and brave, not only during and after the assault, but throughout his illness, remaining quite conscious through all to the end, some seventy-five hours afterwards. But he never rallied from the primary shock. During Thursday night he slept a little, but not naturally, being greatly relieved by the frequent use of morphia. His temperature was kept down, while his pulse was fitful and weak, and on Friday morning 140. His distress was aggravated by a constant thirst, and irritability of the stomach occasioning severe retching and vomiting. On Friday morning his physicians found it necessary to re-open the wound, as the oozing from it had been constant and copious. During the day he appeared to be rapidly sinking, but passed a comparatively favorable night.

The hope of recovery, which buoyed up some on Saturday, was early dissipated. The improvement was of a transitory character. The energies of the wounded man flagged markedly. From Saturday afternoon until the final scene sorrow was depicted on every countenance. The doctors drove cheerfully away on Saturday forenoon; when they appeared at 9.30 o'clock p. m., they found Dr. Metcalf weaker and unable to retain anything upon his stomach. His mind was clear. Hemorrhage had ceased, but there was a discharge of

pus. The man's voice was clear, he was conscious, yet less hopeful himself of the result. The medical men made him as comfortable as possible and left. On Sunday morning the remedies applied on the previous evening had prevented vomiting from 11 until 4 o'clock, and his rest had been comparatively good. Later on the vomiting resumed and continued unabatedly, thus adding to the prostration. Dr. Metcalf spoke to the physicians of his condition. He was remarkably brave, however, through it all. During the forenoon he conversed affectionately with his wife and relatives upon various matters. He asked that his two daughters be brought to his bedside, and he lovingly kissed them farewell. The parting was particularly pathetic. The staff in the asylum were recognized and spoken to, and he thanked his physicians for their attention. He was conscious that they had done all that mortal men could do to aid him. He then requested that all kind friends should be thanked for the solicitude manifested about his case. Then he asked for Rev. Mr. Cartwright. That gentleman came and together they conversed and had prayer. To Dr. Lavell, an old and tried friend, he said he was fully resigned and all references to the future and to his trustfulness in Christ were pleasingly received. Between 12 and 1 o'clock the patient grew rapidly weaker. His voice became feeble, and his mind occasionally wandered. Up to 2.45 he, however, at times was able to recognize his friends, especially his wife, who sat near to his couch. In his delirium he was restless, but after 2.45 o'clock he passed into a slumber. At 3.10 o'clock loving hands closed the eyelids, friends were led away, and from the sick chamber there was wafted home the spirit of a just man made perfect through sufferings. "With gladness and rejoicing shall

they be brought; they shall enter into the King's palace."

A post mortem examination was held on Sunday night. The wound, on the left side of the abdomen, was irregular in shape and very deep, such as would be inflicted by a knife fully three inches long. The weapon had been plunged into the body with considerable force. It struck the side of the pelvic bone, glanced off, escaping the large vessels. No artery of any moment was divided. The replacement of the intestines had been satisfactorily effected. The peritoneum and bowels were found congested and inflamed. Much blood had oozed into the abdominal cavity. Death was caused by the shock, by the congestion and inflammation.

The funeral occurred August 18th and 19th, and was largely attended. Flags floated at half mast, and respect for the deceased was everywhere shown. The body was carried to Uxbridge, the scene of Dr. Metcalf's boyhood, and there buried.

A biographical sketch of the deceased appears elsewhere.

Dr. Lavell, an old friend of the deceased and his family physician is reported to have said of him: "Metcalf was a rare good man for the position he occupied. His temperament was all that could be desired. His official intercourse with his staff was of the kindest character, he was firm, had good administrative ability, and everything proceeded smoothly from the time he entered the asylum as its head. The patients loved him—at least all those whose minds were capable of judgment—his intercourse with them being such as to attach them to him. I was greatly struck, throughout his illness, by his thoughtfulness of family, friends and associates. This thoughtfulness continued till the last. Even in the most trying moments he was deliberative

and cool. I never saw a braver man. He was not agitated at any time. If ever a Christian has gone home to heaven I believe Dr. Metcalf has."

Patrick Maloney, the assailant, went to the asylum in September. He had been sent to gaol from the rear of Frontenac for arson. He was afterwards adjudged insane and sent to the asylum. He suspected that persons were continually following him and trying to poison him. He is about 55 or 60 years of age. He had a hang-dog look, and was very uneasy. He was a lazy fellow and very much disinclined to work. It appears that he had been in the asylum before. He walked up and down his cell continuously while in gaol. He was also very snarly in his disposition.

After the assault, Maloney was found by his attendant standing quietly on the lawn. He asked, "Maloney, what's that you've been doing now?" Maloney replied, with a horrible oath, that he thought he had at last given the doctor his blood money. Lanigan said, "You'll have to go with me," and they started for the main building. When about to enter the enclosure at the main building Lanigan asked Maloney for the knife, and he drew it from his pocket. The butcher, who was also present, made a jump for it when Maloney, with another oath, shouted "Stand off, or I'll give you a dab with it." He gave the knife to Lanigan, after which he was placed in a single room in the main building. It seems that the assassin had the liberty of the grounds. He usually ate his breakfast about 7.30 o'clock, and going out, paced about, slept or played euchre. He wouldn't work, because, as he asserted, there were men paid to do it. At meals he never drank the tea poured out for him, claiming that it was poisoned. He would wait and drink after the other patients had finished. He had been in the chronic ward since last November

The doctor always treated the man with all possible kindness. The knife used by him was an improvised one. The blade was about three inches long, bright and sharp. It was fixed into a handle, though it overlapped when shut by a quarter of an inch. It is probable that he secured the blade in one place and the handle in another, and, putting them together, constructed his weapon.

In August, 1884, Patrick Maloney was sent to gaol to wait his trial for arson. A few days after his admission Dr. Oliver, gaol surgeon, reported him to the sheriff as insane. A board of examination was then held, consisting of Drs. Sullivan, Oliver and Judge Price. Dr. Sullivan, in his report, pronounced the man perfectly sane, and not a fit subject for an insane asylum; that he was neither vicious nor criminal, but broken down through poverty and hard usage. Judge Price certified that the man was weak in body and mind, and unfit to take care of himself. Dr. Oliver said Maloney was insane and dangerous to be at large; that he ought to be restrained and carefully watched; that he would probably become worse and likely suicidal; that he was restless, sullen and had delusions that persons were trying to poison him. Upon this examination he was not sent to the asylum, but still held for trial at the assizes in September, 1884. He was indicted for arson and a jury empannelled, but he was not tried for the offense, the judge directing the jury to ascertain first his mental condition. Dr. Sullivan again reiterated that he considered the man perfectly sane, and that there were hundreds of men walking the streets no worse than Maloney was. A gaol official, so far as he knew, considered the man sane. The jury, however, reported him insane, and he was then transferred to the asylum.

NOTES AND COMMENTS.

THE CASE OF LOUIS RIEL.—The northwest of Canada has had a rebellion of the half-breeds and Indians. As its inception, it was fomented by a half-breed of the name of Louis Riel. After several fights with the volunteers, his bands were scattered and he was made prisoner. He gave himself up, but the fighting leaders escaped into the United States. Riel was tried for treason last July, at Regina, in one of the territories, and the defense was insanity. Riel had been the leader of a rebellion at Winnipeg, in 1870, but an expedition under General Wolsely scattered his forces and he escaped. At the recent trial it was shown that he had been in two asylums as a patient. Once in Longue Pointe, Montreal, and once in Beauport, Quebec. It was shown that on these occasions he had been afflicted with megalomania. His ideas are, that he is to be the great centre of religious and political movements in the world. He is a prophet, and can foretell future events. He is yet to establish a new papacy and pope in St. Boniface, Manitoba. He is to divide the northwest into seven kingdoms, among divers nationalities, and over this heptarchy he is to be supreme ruler. Christ is ever present with him in person, and he has set chairs for Him to sit on and has laid by food for Him to eat. During the fighting he ran about holding aloft a crucifix and kept constantly calling on the Trinity. These and many other delusions were certified to at the trial. Among ignorant Indians and half-breeds he was looked up to as a man inspired, and being educated and eloquent his influence was great. The principal leaders of the rebellion made a figure-head of Riel. He is indignant at being called insane

and wished to discharge his counsel for putting in that plea. It would destroy his idea of greatness and power to declare him a lunatic. Like all such, he possessed a good deal of shrewdness and cunning. The three experts called on the trial were Dr. Ray of Quebec, Dr. D. Clarke, Toronto, and Dr. Wallace, Hamilton. The first two stated that, assuming the testimony to be correct, there was no doubt of the man's insanity. Dr. Clarke said although that was his impression, yet it was absurd to expect any medical man to definitely come to a conclusion of the mental condition of such a man with a cursory examination. Dr. Wallace could see no insanity in him after half an hour's examination, but would not say he was sane. The jury brought in a verdict of guilty with a recommendation to mercy. The jury was not convinced of Riel's sanity.

OVERCROWDING IN MASSACHUSETTS.—The *Boston Medical and Surgical Journal*, September 10, 1885, calls attention editorially to an overcrowding and lack of classification in asylums in Massachusetts that render proper hospital organization impossible. It speaks in moderation of what is known to have been the condition of the Danvers hospital for more than a year past, when it says that, "in spite of most excellent management on the part of the physicians, it has been a disgrace to the Commonwealth." We are told that from one to two hundred patients have been obliged to occupy beds placed upon the floors of the wards at night, and to suffer corresponding inconveniences by day, that proper classification has been made impossible, that personal privacy has been interfered with, that attendants and physicians have been wearied, and their time has been consumed in meeting these exceptional difficulties. This deplorable evil is less bearable from the

fact that it arises partly from easily preventable causes, namely, a lack of system in the selection of cases for hospital treatment.

Our contemporary justly takes exception to that perversion of the function of a hospital for the insane which makes it "a convenient dumping ground for all cases of degenerative nervous diseases attended with mental failure" which are disagreeable to care for elsewhere or whose care elsewhere costs more than at the asylum.

The urgent need of providing inexpensive buildings for chronic cases, and thus relieving the pressure at Danvers and other asylums, was fully represented to the last State Legislature, but no action was taken by it. Overcrowding of the insane is not unknown in other States, and in New York the necessity is arising for increased accommodation, but we know of no Commonwealth in which the need of immediate action is more pressing than in Massachusetts. Surely we have a right to expect better things from the Bay State!

TRAINING SCHOOL FOR ATTENDANTS.—The Board of Managers of the Buffalo State Asylum for the Insane, with a desire to improve and elevate the standard of service in the care of the insane, have established a training school for their instruction and education. This plan is the outgrowth of a system begun by the officers of the asylum in October 1883, among a limited number of attendants. The special training of the school is given by the Assistant Physicians, under the direction of the Superintendent, in such studies and methods as will best fit those who receive the instruction for the special work of attendants upon the insane and for nursing the sick. The course will occupy two years, and will consist of lectures and clinical instruction.

The lectures are given on the fundamental principles of physiology, and of hygiene, including ventilation, clothing, bathing, etc., with the usual directions for the care of the person, the bed, and the room of the sick. Instructions is given upon the most commonly used remedies and their effects, upon the use of the catheter, the taking of temperatures, the administration of food, the control of hemorrhage, and the application of minor dressings. Special attention is given to teaching the best methods of caring for the various classes of the insane, the violent, destructive, suicidal, and epileptic, as also the quiet and convalescent, with directions as to exercise, occupation, amusement and companionship. They are taught to meet emergencies, how and what to observe, and to make written reports upon the physical and mental condition of patients. All who join the training school shall, at the end of the first year, pass a satisfactory examination, before entering on the second year's instruction. At the close of the second year, after passing the required examination, and giving satisfactory service, they shall receive a certificate from the institution as well qualified nurses and attendants upon the insane.

The pay of all attendants shall remain as at present fixed by the Board of Managers, except as hereinafter specified. Those who take advantage of the instruction of the school shall receive, after passing the examination at the end of the first year, the women at the rate of fifteen and the men at the rate of twenty-five dollars per month, and two weeks' vacation annually thereafter without deduction of pay, at a time subject to the convenience of the asylum. After passing the examination at the close of the second year, and receiving a certificate of qualification as trained nurses and attendants, they shall be paid, the women at the

rate of eighteen and the men at the rate of twenty-eight dollars per month respectively.

The trained attendants who are placed in charge of wards shall be paid, the women at the rate of twenty and the men at the rate of thirty dollars per month respectively. The acceptance of the advanced pay attached to these propositions shall carry with it the obligation to remain in each case at least one year longer in the service of the asylum, subject to the provisions of the agreement. For long and faithful service an increase in the pay per month may be provided in special cases.

INAUGURATION OF THE PINEL MONUMENT.—The last number of *l'Encéphale* gives an interesting account of the inauguration of the statue erected by the Medico-Psychological Society of Paris to the memory of the illustrious Pinel. A year has passed since the monument was unveiled, but the society was desirous that the formal tender of its gift to the city of Paris should occur with appropriate ceremonies, and thus atone in a measure for the tardiness of its homage to him who was "at once the benefactor of the insane and the creator of mental medicine." The inauguration took place on July 31st, ultimo, in presence of a brilliant assembly.

The principal group, executed with great artistic skill by Ludovic Durand, is of bronze and comprises two figures. Pinel standing erect holds in his right hand broken chains; at his feet a young female patient is gathering flowers and turns with grateful look to him who has just accomplished her release. On either side of the pedestal are two large stone statues representing *Science* and *Philanthropy*. In the middle is engraved in letters of gold the following legend:

A PHILIPPE PINEL
BIENFAITEUR DES ALIENES
LA SOCIETE MEDICO-PSYCHOLOGIQUE

Dr. Dagonet, of the St-Anne Asylum, President of the Medico-Psychological Society, opened the ceremonies with a short speech. Dr. Robinet, in the name of the Municipal Council of Paris; M. Ponbelle, Prefect of the Seine; Dr. Legrand Du Saulle, of La Salpêtrière; Dr. Ritti, Secretary-General of the Society, and M. Pichon, Municipal Councillor of the Salpêtrière Quarter, thereupon spoke in turn.

The exercises concluded with a lunch given by the Medico-Psychological Society in the consultation rooms of La Salpêtrière. Everything had been perfectly organized by Dr. Motet.

Nowhere is the Frenchman more at home than in the pronouncement of an eulogy, and this was a brilliant occasion for the exhibition of a national characteristic. The speakers vied with each other in oratory, and their addresses comprise twenty pages of beautifully turned periods in *l'Encéphale*. These pages are alike profitable and pleasurable to the reader, furnishing as they do a memorable chapter in the history of the insane, not only in France but in the entire world. We prosaic Americans might well learn lessons in chivalry from our French brethren whose instincts lead them, as Dr. Legrand Du Saulle remarked, to honour genius wherever found. "For us," he said, "public acknowledgment has imprescriptible rights. Its expression may occur after long lapse of time but the hour of reparation will surely come sooner or later."

SEA AIR FOR CONVALESCENT PATIENTS.—Under a conviction that better accommodations and different surroundings should be secured for their convalescent patients, the managers of the Friends' Asylum for the Insane at Frankford, near Philadelphia, have opened a house at Atlantic City, on the New Jersey coast. To

this branch asylum are admitted, in addition to patients from the Frankford Asylum, cases of mental disease of a mild type who require care and medical treatment. In all instances patients will be admitted in conformity with the laws of Pennsylvania.

Gurney Cottage is under the care of Dr. J. C. Hall, Superintendent of the Frankford Asylum, assisted by the attending and consulting physician in Atlantic City, the former of whom visits the patients daily. It is presided over by a competent matron, and specially qualified nurses have been engaged. Accommodation has been provided for ten patients, eight women and two men.

This seems to be a step in the right direction, and the success that has attended the venture has been very encouraging. The house has been full since its opening, and it is proposed to keep it open during the entire year. As is well known the climate of Atlantic City is comparatively mild during the winter. We congratulate the managers and superintendent of the Frankford Asylum on their enterprise, and venture to predict much prosperity for Gurney Cottage.

THE ADMISSION OF VISITORS TO ASYLUMS.—We believe it to be the policy of many State asylums for the insane to admit to their wards all or nearly all persons who apply for that purpose during certain hours. The public has come to regard such admission as a right, and there are those who resent exclusion from the premises, even on holidays, as an outrage on their privileges as tax-payers. Partly in concession to such feeling, and partly from a desire of the officers to accord freer access to the wards, a gradual relaxation in the established rules regarding visitors to the New York State Lunatic Asylum at Utica was permitted.

These rules were framed eighteen years ago, and required that general visitors should not be admitted except upon presentation of a card signed by a manager or the treasurer. For a time no evil effects followed this wider extension of privilege, and soon it became customary to admit the general public every afternoon except holidays and Sundays. After a while, however, abuses became apparent. The asylum came to be a favorite resort of mere sightseers, many of whom visited the institution repeatedly and at short intervals throughout the year. In a great number, perhaps the majority, of instances, these persons were of immature age, and not actuated by worthy motives. Their chief desire seemed to be to see the "worst cases," as they phrased it, and they oftentimes went away fully convinced that there were patients locked up in "cells" whom they had not seen, and this notwithstanding positive assurances to the contrary. No benefit can accrue either to individuals or to institutions by gratifying an idle and morbid curiosity of this kind. Moreover, the discipline and quietness of an asylum must needs thus be interfered with, while, what is worse, the patients' privacy is needlessly intruded upon.

Some time ago the old rules were re-established and re-enforced at Utica. The diminution in the number and character of visitors has been quite marked since this course was adopted, and the patients have little occasion to complain, as they formerly did, of the heedless remarks and significant looks to which they were constantly exposed under the old plan. Exceptions to these rules are properly made in favor of the relatives of patients, and official, professional and scientific persons.

TYPHOID FEVER AT MORRIS PLAINS ASYLUM.—Several cases of typhoid fever have lately occurred among the employés and patients at Morris Plains, N. J. The disease seems to be attributable to a faulty disposition of the sewage of the institution, into the details of which we shall abstain from entering at present. At latest accounts there had been twenty-three cases with four deaths, the latter having occurred in previously debilitated patients. The Health Board are now considering the matter, but have not yet made public their opinion. The problem is one requiring much thought and will probably involve heavy expenditure. We wish the sanitary experts Godspeed in their important labors. Meanwhile, we are pleased to hear that the worst is apparently past, and that the cases are nearly all of a mild character.

ASYLUM APPOINTMENTS.—*Arkansas*.—Dr. P. O. Hooper, until recently president of the Board of Trustees, has accepted the Superintendency of the State Lunatic Asylum at Little Rock, Arkansas. Dr. Hooper has been identified with the asylum since the board organized in 1880, and is thoroughly familiar with the details of management. The appointment gives universal satisfaction. We regret that the vacancy has been occasioned by the failing health and enforced resignation of Dr. C. C. Forbes, who retires from the position that he has worthily filled as first superintendent, with the best wishes of his friends that his health may be speedily restored.

Michigan.—Dr. R. O. Long has been appointed superintendent of the Michigan Asylum for Insane Criminals at Ionia.

Dr. James D. Munson, for several years assistant

physician to the Eastern Michigan Asylum at Pontiac, has been elected superintendent of the new Northern Michigan Asylum at Traverse City. It is expected that this asylum will be ready to receive patients in November.

New Jersey.—Dr. Edwin E. Smith has been appointed superintendent of the State Asylum for the Insane at Morris Plains, N. J., *vice* Dr. H. A. Buttolph, resigned. Dr. Smith had been assistant superintendent for several years, previously to which he was an assistant physician at the New York State Lunatic Asylum at Utica.

Canada.—The vacancy in the superintendency of the Rockwood Asylum, at Kingston, Ontario, occasioned by the lamentable death of Dr. Metcalf, has been filled by the promotion of Dr. C. K. Clarke, late assistant physician and brother-in-law of the deceased.

Dr. Millman, of the London Asylum, Ontario, has been promoted to the position of Assistant Medical Superintendent of the Rockwood Asylum, Kingston.

Dr. Robinson, Second Assistant Physician of the Toronto Asylum, has been transferred to the London Asylum and promoted.

CASE OF LOUIS RIEL.—As we go to press we learn that arrangements have been made to send an appeal in Riel's behalf to the Privy Council. A committee having the matter in hand have gone to England for that purpose. Riel's reprieve extends to October 16. Meanwhile, a manifesto has been issued calling upon the French press, and notably *La Minerve*, to take the matter in hand and make it a public question, or else not to oppose those who are working in the direction of obtaining a settlement of the grave constitutional points at issue.

OBITUARY.

DR. W. G. METCALF.—Dr. W. G. Metcalf, the late Superintendent of Kingston Asylum for Insane, was born in 1847, in the town of Uxbridge, Ontario. He began asylum life in Toronto on the 7th August, 1871, as clinical assistant to the venerable Dr. Workman, and here it was he laid the foundation of his future success and learned the broad principles of true humanity. In 1874 he left Toronto Asylum to engage in private practice, but in a few months returned to the work most congenial to him, and was installed as Assistant Medical Superintendent of Toronto Asylum, which position he filled until June, 1877, when he was transferred to a similar post in the London Asylum. In April, 1878, he was placed in temporary charge of Kingston Asylum during the illness of Dr. Dickson, and when the latter retired from the service, was appointed Medical Superintendent, a position he continued to occupy until he fell at his post of duty.

On the morning of the 13th August, 1885, while making his usual round in company with his assistant, he was fatally stabbed in the abdomen by a criminal lunatic, and although he lingered for a time, never rallied from the shock and passed away in peace on the 16th August, 1885. The events connected with his death, fill the saddest chapter yet written in the history of Canadian asylums, and the cruel fate of so promising a man, is deplored by the whole community. As a practical administrator Dr. Metcalf had few equals and no superior. His creed was taught him by his well loved preceptor, Dr. Workman, and its prominent characteristic was "my patients first." He was an enthusiastic worker in his specialty and a believer in details, spar-

ing no pains to master every point in connection with any labor he undertook, and his wonderful genius for mechanics rendered him particularly efficient as a practical manager of asylum affairs. His prominent mental features were earnestness, sincerity and love of justice. At the time of his death he was a firm believer in non-restraint, although when he adopted this system on trial three years ago, he was convinced that non-restraint could not be carried out. He never forgot that insane patients are human beings and at all times had a pleasant smile and kind word for the unfortunates under his care. As he lived, so he died, thoughtful of all but himself, and as he felt the near approach of death, summoned his officers to his bedside and bade each one an affectionate farewell, with almost his last breath saying "wish the attendants good bye for me and tell them my hope is that they will all continue their work patiently and perseveringly." No murmur of reproach for his sad fate escaped his lips—the painful illness was borne with heroic fortitude and the poor fellow died in his private office as most brave men wish to die, at the post of duty.

Modestly he lived—bravely he died—and by deeds, not words, built for himself a monument more lasting than brass.

GEORGE LEIB HARRISON.—G. L. Harrison, a prominent merchant and citizen of Philadelphia, who for many years had taken a keen interest in all matters pertaining to lunacy in Pennsylvania and throughout the world, died September 9, 1885, aged seventy-three years.

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ON THE PHYSIOLOGY OF THE BRAIN
AND ITS RELATIONS IN HEALTH AND
DISEASE TO THE FACULTIES OF
THE MIND.*

BY H. A. BUTTOLPH, M. D.,
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Mr. President and Gentlemen of the Association:

I need not say that in proposing to discuss this subject, I do so with a full appreciation of the inherent difficulties that have heretofore existed, that still remain, and perhaps, that will always attend its investigation.

For long years, for centuries even, the brain was a mystery and a stumbling block to all who attempted to demonstrate its structure or divine its function.

Among the vague impressions of the ancients in regard to it, they held that it was a cold humid mass destined to temper the heat of the heart; that it acted as a sponge, attracting to itself the humidity of the body—that it was an excrescence of the spinal marrow, and acted as a secreting gland.

Without attempting to state the history and progress of more enlightened views in regard to the structure and uses of this most important organ as held by the

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

ancients, I come at once to speak of the investigation and views of the representative authors and teachers of the most modern school.

In doing this, however, I reserve to myself the privilege of referring, at a later period, to the brilliant results attained by other investigators, for whose names, characters, labors and discoveries, I have the greatest respect and veneration.

With the object of bringing before the Association a clear and correct statement of the views of the most modern authorities in regard to the regions and parts of the brain, together with their proposed methods for ascertaining its functions, I select as representative authors and teachers on the subject, works by Dr. Alexander Ecker, Professor of Anatomy and Comparative Anatomy in the University of Freiburg, Baden; Dr. J. M. Charcot, Professor in the Faculty of Medicine, Paris; Chief of the Salpêtrière; Member of the Academy of Medicine, &c., &c. Also, Dr. Charles Richet, former Interne of the Hospital of Paris; and Lionel S. Beale, F. R. C. P., London, author of *Disease Germs*, &c.

To make sure of fairly representing the views of these several authors, I quote in turn from each, in the order of their mention, first, language expressive of sentiments in regard to the brain and the mental faculties; also, descriptive of the methods to be followed in pursuing their investigations. In making quotations from the text, also in remarking thereon, I shall do so as briefly as possible. This I state that members of the Association may not be discouraged at the amount of time taken in the beginning, whatever may occur in the ending of my discourse.

The work of Dr. Ecker is "*On the Convolution of the Human Brain*," and consists only of a carefully

prepared topographical description and classification of the convolutions with numerous illustrations. It appears to me as admirably adapted to fulfill the object for which it was intended.

In the introduction the author states, without *explaining* the *grounds* or facts upon which his *opinions* are *based*, that the cortex of the cerebrum, the undoubted material substratum of our mental operations, is not a single organ which is brought into play as a whole, in each and every psychical function, but consists rather of a multitude of mental organs, each of which is subservient to certain intellectual processes, is a conviction which forces itself upon us, almost with the necessity of a claim of reason. The hypothesis set up in opposition to it, of a single organ for the carrying out of the multiplicity of psychical functions would present about an equivalent point of view, to that of "vital force," which has received its *coup de grâce*.

If, however, as we conceive to be an undoubted fact, certain portions of the cortex of the cerebrum subserve certain intellectual processes, the possibility is at once conceded that we shall some day arrive at a complete organography of the surface of the brain—a science of the localization of the psychical functions. Such a one as this—that is to say, a knowledge of the psychical organs of the brain in all their relations—is certainly one of the most important problems for the anatomy and physiology of the next century, the solution of which is destined to bring about no small revolution in psychology.

Here I will observe, that notwithstanding the skill and labor expended by the author in preparing and publishing this excellent work, yet the object in view, that is of localizing the organs of the mental faculties, is admitted to be as yet wholly unaccomplished.

I next quote from the lectures on Localization in Diseases of the Brain, by J. M. Charcot, Professor in the Faculty of Medicine in Paris; Chief of the Salpêtrière, &c., &c., and translated by E. P. Fowler, M. D., of New York.

The author remarks in his first lecture that long explanations are unnecessary to convey what is meant by *localization* in cerebral physiology and pathology. The term has long since become a common one, and its meaning is well known. I will therefore only remind you, that the principles of cerebral localization rest upon the following propositions: The encephalon does not represent a homogeneous organ, a unit, but rather an association, or a confederation, composed of a certain number of diverse organs. To each of these organs belong distinct physiological properties, functions and faculties. Now, the physiological properties of each one of these parts being known, it becomes possible to deduce therefrom the pathological conditions; this being of course but a greater or less modification of the normal state, and not a result of the intervention of new laws.

We will employ the varied knowledge furnished by normal anatomy and experimental physiology, together with those clinical observations which have been rendered reliable by a methodical and minute examination of organic lesions, and thus endeavor to ascertain on what foundation this proposition rests. The importance and the decisive results which depend on these last named examinations, can not be overestimated. For although normal anatomy and experimental physiology may often suggest the true direction towards localization, still nothing but the actual examination of organic lesions will permit a final decision, and *furnish the proof*, at least so far as concerns the special subject of our studies—man.

This brings us to an examination of the encephalon, under its morphological aspect. It is understood that we do not attempt a rigorous description. I propose only to draw a general outline, a knowledge of which is indispensable to our object. To simplify a very complex situation, I will confine myself to the brain—that is, to that mass of nervous substance composed of two hemispheres, and situated at the superior extremity of what are called the *cerebral peduncles* (*crura cerebri*.)

The two hemispheres are nearly symmetrical and so nearly identical in their structure that whatever may be said of the one, may, anatomically speaking, apply to the other. Each one is enveloped in a layer of grey substance. The central part is formed by means of a white substance, in which are furrowed the ventricles, and where are also seen, as if locked together, the central ganglionic masses, namely, the *thalami optici* and the *corpora striata*.

A transverse section made to intersect the corpora mammillaria best demonstrates the main features of the reciprocal relations of the central parts.

The author recommends for use the manual of Ecker, before referred to, which, he states, contains good topographical plates, accompanied with a simple nomenclature, together with synonyms; also as an excellent work upon the subject, a thesis by Gromier, written under the inspiration of Paul Broca, and entitled, "Study upon Cerebral Convolution in Man and Monkey, 1874."

Comparative anatomy is also a powerful adjunct in the study of the convolutions. Between the monkey and man, for example, the resemblance is striking as concerns the fundamental convolutions and furrows, and that arrangement which in man is somewhat

unintelligible, is explained in the brain of the monkey by reason of its greater simplicity.

In a succeeding lecture the author states that the structure of the grey substance in whatever region of the hemispheres, presents certain general characteristics.

All parts of the cortex are composed of essentially the same elements. Each one of the composing elements may present important relative deviations from the standard type, according to the region observed; and in a *regional study* of the grey substance great weight should be given to the different proportions and measure in which these elements are distributed in different parts.

After having examined these components individually, we will investigate as to how they combine to form the grey substance. Our description will commence with those elements which play the principal rôle, that is, those *ganglionic or nerve-cells* which are the special characteristic elements of this region; they are usually called the *pyramidal cells*. Then follows a description in detail, of the forms, sizes and number of cells of which the different regions are composed, and in which they are situated, which is, naturally, one of the steps of the enquiry in regard to the anatomy of the parts.

Still farther on, our author states that our preceding topographical studies make an important step, for they will better enable us to determine the locations, extent and configuration of lesions revealed by autopsy.

It will be remembered that Charcot, like Ecker, the authors first quoted, admits, or rather claims, that the encephalon does not represent an homogeneous organ, a unit, but rather an association or a confederation, composed of a certain number of diverse organs; and that to each of these organs belong distinct physiological properties, functions and faculties.

With these statements of the views of our author, in regard to the physiology of the brain as connected with mental manifestation, the enquiry naturally arises, in what way they are to be established by the methods proposed. These are as stated, first, a carefully made topographical map of the brain; second, pathological enquiries as to the effect of disease in different regions and parts of the organ in connection with various *physiological experiments*; which means the *vivisection of animals* and, *particularly*, the *monkey*, as being the nearest approach to the human species.

It is plain, however, that the physiology of the brain consists of many organs for manifesting distinct functions and faculties, and that this can only be established by the use of these methods *conjoined*, if at all, which is doubtful, if not wholly impossible.

Of the first method, or that by mutilation of the brain in living animals, it may be said that the results by different experimenters have been so various and contradictory, that some of the ablest physiologists have regarded it as a highly questionable method. It has been stated by a high authority that four conditions are necessary to its success. Firstly, that the part injured must be a distinct organ with a specific function. Secondly, the part must be cut without involving the disorder of the functions of other parts. Thirdly, that the function of the part must be known; and fourthly, after the operation, the state of these functions must be within the reach of observation.

In the experiments, however, these conditions were not observed, and they were made on the assumption that while *nothing* was known of the functions of the brain, yet experimenters expect to discover the function of mutilated or excised parts by observing the powers which were *not* manifested when they were

injured or destroyed. As well might the working of machinery be observed and tested in connection with the removal of some essential part, as to expect that the brain would be devoid of shock and disorder in such circumstances. The very fact, too, that the organ of no *mental* faculty, but only certain nervous and motor centres of the brain have been localized by this method, (except possibly language,) shows that it has thus far been barren of very important results. Aside from this, it would be quite unnatural to expect to obtain useful information in regard to any but the lowest animal faculties of man from mutilations of the brains of monkeys as proposed.

Richet, author of "Histology and Physiology of the Cerebral Convolutions," states, that in monkeys, even of the highest order, the gorilla for example, the convolutions are very undeveloped as compared with those in men. The latter author farther remarks that a great number of experiments have been made upon the convolutions of mammifera, and that the conclusions are uncertain and obscure, and finally, that there is no region upon the surface of the convolutions especially assigned to intellection.

The same author states, in speaking of modern enquiries in regard to the physiology of the brain, that induction from probabilities, or ill-demonstrated experiments are unreliable; also, that recent labors have been accepted too much to the exclusion or neglect of those further in the past. It is an unfortunate tendency, and one that results in injustice. For example, in the physiological history of the convolutions some of the finest discoveries were made by Flourens. There are few experiments as interesting as that in which the pigeon deprived of its cerebral lobes, sits plunged into a profound sleep of everlasting unconsciousness—and yet, of what *practical* value is such an experiment!

I, however, most fully realize that recent investigators, Fritsche and Hitzig, Ferrier, Charcot and others have made magnificent discoveries; still it is Flourens who stands in the front rank, and it need not be considered that the science of cerebral physiology dates from 1872. Ferrier says: "When we examine the actual facts and records of cerebral disease, we find in apparently similar conditions, so much diversity, that it seems almost impossible, from a clinical point of view, to separate accidental from essential; to distinguish between direct and indirect consequences; or to determine whether phenomena are related by causation, or are mere cases of juxtaposition or co-existence. Nor do the facts of experimental physiology seem so consistent with themselves or with the undoubted facts of clinical research as to inspire us with unhesitating confidence as to their accuracy, or as to their applicability to human pathology."

It is not to be wondered at, therefore, that many should still doubt, and reserve their opinion on this question of the localization of cerebral function and cerebral disease.

Failing to ascertain the *physiology* of a region or part of the brain by vivisection, it would be unreasonable to expect to do so by any *pathological* enquiry alone, as the latter would reveal only the change in the part from a state of healthy action, and not its power for the manifestation of a mental faculty. It will be admitted, however, that the *anatomy* and *physiology* of a part being *definitely known*, all pathological enquiries may become the very best means of verifying a knowledge of the latter.

I now refer to clinical cases by M. Allen Starr, M. D., about one hundred in number, contributed to the *American Journal of the Medical Sciences*, for April and

July, 1884, and entitled "Cortical Lesions of the Brain." It will be perceived that the author does not claim that the organ in the brain of any mental faculty could be located through the teaching or agency of the cases presented. His conclusions are, however, "first, that various powers of the mind are to be connected with activity in various regions of the brain; the surface of the organ being the seat of conscious mental action; and, second, that the highest qualities of the mind, intellect, judgment, reason, self-control, require for their normal display, integrity of the entire brain, but, especially, of the frontal lobes."

Dr. Starr also gives a diagram showing, and states, that the cortical areas of the brain are connected with the organs of the body by nerve fibres which pass inward and downward from the surface, and collect together in a great tract—the internal capsule—in the centre. It is, therefore, evident that fibres, whose terminations are far apart, become closely approximated as they pass inward to the common tract. This is clearly shown in the diagram, where fibres from all the areas are seen to join in the capsule. But it becomes at once evident that pressure exerted over any considerable surface of the cortex and transmitted inward, will cause a compression of nerve fibres, whose origin is distant from the area directly involved. A tumor, for example, which lies in the middle third of the central region, and which depresses the surface of the brain an inch, will produce not only destruction of the area on which it lies, but also compression of the nerve fibres passing inwards from the adjacent lower and upper thirds of the central region. Pressure upon nerve fibres interferes with the performance of their function, therefore in such a case the distinction must be made between direct and indirect local symptoms;

the first due to the destruction of the cortical area, and the second due to compression of fibres from adjacent areas. In this manner many cases of extensive paralysis from a limited lesion, receive an adequate explanation.

Each area of the cortex is connected not only with parts of the body, but also with adjacent and with distant areas by means of associated fibres which pass from convolution to convolution. By this means, all parts of the brain surface are related to one another. An impulse starting in any region can therefore reach any other region in a normal brain.

The separate motor areas are therefore in anatomical relation with each other and with non-motor areas.

Some of the general conclusions of Dr. Starr:

From the analysis of the cases of cortical lesion of the brain here collected, and a review of the results reached by foreign authors, the following conclusions are drawn—

1. Various powers of the mind are to be connected with activity in various regions of the brain; the surface of the organ being the seat of conscious mental action.

2. The highest qualities of the mind, intellect, judgment, reason, self-control, require for their normal display integrity of the entire brain, but especially of the frontal lobes. A change of disposition and character may be considered as symptomatic of disease of the brain, and, in the absence of the other symptoms, of disease of the frontal lobes.

3. The power of sensory perception is disturbed over the various regions of the brain with which the sensory organs are anatomically connected. In these regions objects are, not only first consciously perceived, but are also subsequently recognized; and, hence, it is

in these regions that the memory pictures are stored, by whose aid the act of recognition is accomplished.

Still another and most interesting, because of anatomical and pathological enquiries made by Charcot, Richet, Beale and other modern investigators abroad, is that which relates to the number, arrangement, form, size and other peculiarities of the minute nerve cells of the cortical portion of the brain. Among the most notable microscopists in hospitals or asylums for insane in this country, is Dr. Theodore Deecke, Special Pathologist to the State Asylum at Utica, New York, who, it is understood, has been highly successful in having constructed a microscope of great power for the purpose of his investigations. By the aid of the various facilities furnished to, and the special skill developed by Dr. Deecke, he has made a large collection of most interesting anatomical and pathological specimens, for which he is justly entitled to great credit. Were it possible, as the result of increasing knowledge in this line of enquiry to ascertain what modifications would be required in the number, arrangement and construction of nerve cells, to fit each of the organs of which the brain is composed, for the performance of its own special duty, the great problem of brain function would be easily and quickly solved, but it is quite certain that the organ of each power or faculty of the mind must be definitely located by other means, before such microscopic investigation as this implies, can be made to determine more than the existing state of the organ, as it regards health and disease.

I conclude this branch of my subject, by the statement, that if it be true, as the authors quoted positively believe and teach, that the brain is not a homogeneous organ, a unit, but consists of an association or confederation, composed of a number of distinct organs

and functions, that it is my candid conviction, that neither by dissection, by comparative anatomy, by vivisection or experiments on living animals; by pathological investigation singly, or combined with the latter; or, lastly, by microscopic investigations, however long and carefully applied, can the function or the physiology of its several parts be ascertained.

PART SECOND.

I come next to speak of another method of investigation in regard to the physiology of the brain, which is none other than that originally proposed and followed by Gall, and in which Spurzheim, Combe and others afterward took prominent parts. Various impressions in regard to the legitimacy of Gall's method of proceeding have been held at different periods, and by men of equal eminence as anatomists, physiologists and mental philosophers.

Aside from the fact that Gall and Spurzheim ultimately became anatomists and comparative anatomists, also pathologists of great skill and renown, for the period in which they lived, (and in regard to the brain and nervous system in particular,) of any period before or since; nevertheless, it is true that Gall's original method for establishing a correct physiology of the brain consisted of examinations of that organ made on the exterior of the cranium.

While it will appear from the history of Gall's life and work, to be made hereafter, that many of the important results of examinations were made at an early period of his life, and before he laid any claim to anatomical knowledge; yet it will also be shown that his inferences in regard to physiological facts were fully verified and confirmed, so far as it was possible to do so, by subsequent anatomical demonstration.

As preliminary, however, to any statement of the results attained by Gall in his early enquiries by the method he adopted, I need scarcely say that he nowhere claims to explain *how* the brain, or indeed any bodily organ performs its function, this being distinctly beyond the knowledge granted by the infinite to finite minds.

I, however, frankly claim in behalf of his method of divining the uses of the regions and parts of the brain, that while it may not be the only legitimate methods for ascertaining the mental functions of the brain in all its parts, yet, that it was believed by Gall and his associates, and their adherents since, that, as a *first* enquiry in learning the uses of organized parts, it is the most approved of all others, whether the subjects observed belong to the animal or vegetable kingdoms.

Did any one ever attempt to predict, as to the character of the flower, the foliage or the fruit of a tree or shrub from the most accurate botanical delineation of its parts; or, in regard to the varying instincts and habits of animals of different species, from the anatomy of their brains?

Since the world began, has it not been the universal and invariable practice of observers, first to ascertain the facts relating to the capacity, character and habits of animals by observation, and in regard to different species by comparison of their points of resemblance and difference with their external and physical organization and functional powers?

Do not dealers in and users of domestic animals found their judgments, alike of their physical and mental powers and qualities upon knowledge derived from external examination? Certain physical developments in the horse indicate the possession of general strength, others great speed and endurance in action, others

the temper and disposition of the animal, and so on. The presence and association of these facts and qualities in regard to the horse may be fully verified on the living animal, and hence becomes the strongest inductive evidence in regard to fixed relations between organization and character.

Again in the practice of the physician, his knowledge of the location of the disease and the condition of organs in diseased states is first, if not exclusively, learned by observing the symptoms which can not be verified by pathological enquiries, except in case of the death of the patient. It may be admitted, however, that in a certain sense this method of proceeding is empirical, and for the time being so it is; but no more so than are the methods daily and hourly practiced by every human being, in the use of his senses, in forming judgments, in regard to the subjects to which they relate, rather than by an attempt to do it by scientific processes. When the subject admits of it, however, the latter may be practiced as an interesting scientific enquiry, or in verification of results reached by the inductive method.

In regard to man, it is in accordance with universal observation, that in the development of his brain and in the strength and action of his higher powers, mental and moral, the range of difference is a thousand fold more than exists even in the highest species of animals.

What more natural thing to occur, therefore, than for Gall, with his acute perceptive faculties at all ages, to note differences in the mental peculiarities, even of his school fellows; then to wonder, and ere long to believe, that they depended upon, or were connected with some corresponding development in the brain. Similar facts had undoubtedly made similar impressions on other

minds before Gall's period, as they have done ever since to this day, showing how strong are the convictions of even untrained minds in the general truths of the science. With increasing age and opportunity, his observations took a wider range, and were attended with still more definite and practical results. At first, and indeed at all times, at least during the earlier years and stages of his investigations, examples were sought showing the lowest and highest degrees of development of brain, and the corresponding manifestation of the faculties and feelings of individuals.

The extreme degrees embracing the driveling idiot, with small brain and less mental action than was to be found in some species of animals, up to the highest grade of development of brain in men and women of the most exalted mental powers.

Let it be understood that these observations in regard to the brain and mental manifestation were repeated in scores and hundreds of instances, so that the general inference on the part of Gall was, that there existed such a fixed relation between the two, that there was no ground for doubt on the subject. What stronger inductive evidence of the truth of the proposition was it possible to obtain. Farther observation showed that while the whole mind depended for its manifestation upon the whole brain, which everyone now admits, yet that the cerebral organs on which the faculties depended, were associated in different regions of that organ, according to their character and office in the mental group. While this general classification might to some extent have been inferred, yet Gall established it, as in the former instance, by the same inductive evidence from the multiplied observation of individual organs as before.

Of course, it was easy and most natural to infer that,

so far as related to the animal organs and faculties, possessed in common by man and animals, that they would be located in the same or basilar region of the brain in the former as in the latter. Gall, however, proved this to be the case by the same careful system of extended observations as before. To this extent it may be remarked, that the facts of comparative anatomy used afterwards by Gall and Spurzheim, with so much point and power, were brought forward to verify the correct localization of organs in this and in the other regions of the brain, as shown by the inductive method first in use.

In regard to the frontal and coronal regions of the brain, still more numerous and careful observations were made to establish the fact that to them should be assigned first the organs of the intellectual faculties, and, second, the higher sentiments peculiar to man alone.

Here I beg to inquire in passing, as to what possible advantage can be gained by physiological experiments, or brain mutilations of monkeys (the race of animals supposed to be nearest that of man) in ascertaining facts in regard to these two classes of faculties in the latter; and, also, for another class of scientists to endeavor to bridge over the chasm between monkeys and men, by any other method than an act of creative power by the infinite mind.

This, Mr. President, brings me to the very climax of the inquiry, and to the statement of the fact, that the underlying principles of mental science, based upon these views of the physiology of the brain, has been the pole star of my whole professional life—forty-two years of which (less sixteen days) I have been closely engaged in carrying out the professional and executive details of large institutions for the insane. I therefore

do not profess to have had either time, skill or strength, personally to verify the anatomical facts that corroborate the physiological views of Gall and Spurzheim, or to have made such personal observations in regard to the size and configuration of the brain, as they and others have done, to establish the truth of the science.

The next inquiry in the system of Gall and Spurzheim is that which relates to the location (in more modern phrase localization) of the individual cerebral organs belonging to each of the several regions of the brain and classes of faculties.

Without prolonging my statement by going into detail on this the most interesting and important branch of the enquiry, I will state that the facts were established by the most persistent and prolonged observation and comparison of individuals whose mental, moral or animal faculties were unequally manifested. These were cases of partial genius in some direction, while others showed partial congenital deficiency, giving in strongly marked cases, very distinct local differences, in the size and form of their heads.

After long years of the most patient and extended investigation of this class of subjects, as the location of individual organs could first be established in no other, and in connection with all the aids to be derived from anatomy and comparative anatomy of the brain, these eminent men, assisted largely by Mr. George Combe in the perfecting of details of arrangement and classification, presented a system of mental philosophy based on the physiology of the brain, destined, as I verily believe, ultimately to supersede all the metaphysical systems that have gone before or that now exist; and that it is par excellence the most important question for this, or for any succeeding age to decide.

Before making remarks of a practical character based on these views of the physiology of the brain in health and disease, I think it but natural to quote from "Spurzheim's Anatomy of the Brain," a description of his method of making the demonstration of the parts of that organ, which he claimed as original with Gall and himself.

GALL AND SPURZHEIM'S METHOD OF DISSECTING
THE BRAIN.

As Gall and Spurzheim claim to have originated a peculiar and improved method of demonstrating the parts of the brain, I will quote from a work on the anatomy of the brain, by the latter, giving information on this point. The author remarks:

I may, indeed, say generally, that an examination of all the anatomical works published before our time, and an enquiry into the various modes in which the brain has been dissected, whether in public or private schools, will not fail to convince every candid mind that there is not even a hint at anatomico-physiological views which we have given to the world. These views some modern anatomists have adopted, and we still advance our claim of right to be considered as the discoverers and introducers of a new method of dissecting the brain—as the first demonstrators of the anatomy of its masses in harmony with their physiology.

I have shown that we consider the nerves commonly entitled cerebral, as independent of each other, and that we regard the masses of the cerebellum and brain properly so-called, as added to the nerves of the five senses and of voluntary motion. This point of doctrine established, we view the brain not as a unit or single organ, but as an assemblage of particular apparatuses destined to special and determinate functions, after the manner of the nerves of the external senses. To this it may be said that several anatomists have spoken of many peculiar parts; that they have even designated these by appropriate names, consequently that our ideas on the plurality of apparatus are not true.

There is no doubt whatever that all anatomists have recognized distinct parts of the brain, and given them names according to

their physical qualities. They have found hemispheres, convolutions, cavities, striated bodies, pea-shaped bodies, stalks or legs of the brain and cerebellum, writing pens, ram's horns, semicircular tape-worms, pyramidal and olive-like bodies, &c., &c. Now we, in showing that the individual masses so named, do by no means constitute special apparatuses, as performing peculiar functions, differ from all the anatomists who have gone before us. We were also the first to prove the relative proportions that exist between several of the cerebral masses, and to examine them in their mutual relations. If I continue to make use of the mechanical nomenclature to speak of parts in particular, which can no longer be considered as special apparatuses, it is only for the sake of being more readily understood. My connected description will show what masses I look upon as peculiar organs.

Our physiological views do not, it must be evident, allow us to go on cutting the brain into slices; this procedure, indeed, ought rather to be entitled a destruction, than an anatomical demonstration of the cerebral structure; it is precisely as though one should pretend to dissect a leg or an arm, by slicing down those members transversely, or to show the structure of the thoracic or abdominal viscera, by treating the trunk in a similar manner, and giving names to the appearances exposed after each successive slice. We commence our dissection at the place where the proper cerebral masses are added to the nervous parts already described; we trace them in their continuations, and in their mutual connections, and in the connections they maintain with the nerves of the five senses, and of voluntary motion; in short we proceed in the dissection of the brain in a manner precisely analogous to that which is followed in the anatomical demonstration of the other parts of the body.

Besides the above general anatomical principle as regards procedure, it is important to know that on account of their extremely delicate organization the structure of several cerebral parts may be more easily and clearly exposed by means of scraping than by cutting. This is the reason why I frequently prefer the handle to the blade of the scalpel, for removing parts that cover those whose course I would show—for instance, the passage of the pyramidal bodies across the annular protuberance—the continuation of the anterior commissure through the striated bodies in the middle lobes of the brain, and of the anterior pillar of the formix onward to the mammillary bodies and interior of the thalami.

The brain should be removed from the cranium, care being taken not to tear the crura at the superior edge of the annular protuber-

ance, (an accident that is very apt to occur,) nor to injure the medulla oblongata at the lower edge of the same part, and to cut the spinal mass so low down as to obtain, besides the entire medulla oblongata, the upper part of the true spinal cord. The brain thus freed from the skull is to be put upon a plate with the base uppermost. The cerebellum and medulla oblongata having lost the support of the bone now falls backward. In this position all the appearances presented by the base of the brain are visible."

It is remarked by the author of the preface to the American edition of this work, that no one will question the unparalleled skill, ease and perspicuity with which Spurzheim laid open to his anatomical classes the heretofore hidden mysteries of the brain. In Boston, where we had been accustomed to the ancient method of exposing, or rather, keeping out of view, the structure of the cerebral masses, by slicing the brain, each demonstration of Spurzheim seemed to his attentive audience as a ray of light beaming through the mist and dispersing the bewildering haze in which the subject had before been enveloped. We had heard, indeed, that something of the kind had been accomplished by this same Spurzheim in Europe; but the strength of old incredulity had not been put to the test. The presence of this genuine anatomist actually demonstrating the brain, and displaying its organization, had not hitherto been granted us. At length, however, he came and taught until with most, if not all his auditors, unbelief and prejudice began to vanish by degrees, and the consciousness of truth to reign in their stead. No one then present can say in sincerity that he was not instructed; but, rather, with the exception perhaps of two or three, all will pronounce themselves not only instructed, but converted. By this method (and there seems to be no other systematic course,) the true structure of the brain, from its com-

mencement in the medulla oblongata to the termination of its diverging fibres by which all parts are brought into perfect connection, is discovered, together with the reinforcement of these fibres and their successive additions, by means of the grey substance distributed throughout all parts of the cerebrum and cerebellum. Thus the fact of the plurality of the organs in the brain, is established together with their constant inter-communication.

If with the knowledge of this important anatomical disposition of the cerebral organs we now connect the multiplied and multiplying facts derived from the examination of the exterior of the cranium, and also the observations made upon the intellectual and effective faculties of man, together with the state of the brain and mental manifestations in disease of that organ, we can not easily avoid the conclusion arrived at by Gall and Spurzheim, that the faculties of the mind are innate, and that they possess a habitation in the brain well characterized and defined.

BEARING OF PHYSIOLOGICAL VIEWS ON MENTAL PHILOSOPHY.

I now assume for the purpose of describing the relation between the faculties of the mind in health and disease, not only that the physiology of the brain as herein set forth, is true, but that it affords a clear and intelligent basis, alike for a system of mental philosophy, and for the comprehension and treatment of insanity.

I state first in regard to systems of mental philosophy that in all former ages, and largely in this, the so-called systems of mental science have been based entirely upon speculative views in regard to the nature and essence of mind in the abstract, and without any

intelligent idea of its connection with the brain, as the physical organ, for its manifestation in this life.

While some have admitted the existence of an indefinite and vague relation between the whole mind and the whole brain, others have believed in a mere supernatural dispensation of gifts. We claim, however, that the brain is indispensable to mental phenomena, that the various classes of organs, or parts of which it is composed for the manifestation of intellect, sentiment and propensity constitute its different regions. We thus find that the individual organs of each region are *pecially endowed* by the Creator for performing the office assigned them; a thing no more mysterious or improbable in itself than that the nervous apparatuses of the several external senses, should be able to perform their functions, by virtue of similar provisions.

This then brings us, and by the only practicable method that of Gall and Spurzheim, to the very confines of discovery in this direction.

While it is not claimed that organization produces the intellectual and affective faculties of man's mind, as a tree brings forth fruit, yet it is held that organic conditions, as above stated, are necessary for their manifestation in this life. While the fact of this association, by the Creator, of the mind of man in development and manifestation with organized matter can not be questioned, it is an act only of idle impiety for man to question, either his power or his wisdom for accomplishing it in accordance with the established laws of the physical world in which he resides. It may, therefore, be stated that the brain consists of a great number of individual organs or parts, each being endowed for the performance of special functions, and all of which are either directly or indirectly placed in

relation, and are adapted to the world in which we live, through the agency of the five senses whose functional powers are derived from the same source.

From this it follows that all of the infinite variety in the mental manifestations of the human species, primarily depends on the varying strength and activity, single, and combined of the individual organs of the brain. In accordance with this view and beginning with the frontal region, we have the organs of the intellectual faculties divided into perceptive and reflective. The first collects facts, the second compares and reasons from them.

The coronal region contains the higher sentiments proper to man alone; while in the middle posterior and basilar regions are located the organs of the feelings and propensities common to man and animals. All affective faculties and propensities are blind, and dependent upon enlightened intellect for guidance and control.

With this view of mental philosophy, or of the mental constitution of man, it is obvious, that the highest office of educators in all departments of instruction, and at all ages of their pupils, is to develop alike the powers of the body and the faculties of the mind to the extent intended by nature that they should reach, and in harmony with each other. If certain powers and faculties are relatively deficient or weak, while others are unduly strong, the education and training received should tend to render them more equal and uniform according to the standard of the individual. Above all every person should hold correct views as to the nature and object of each primitive mental faculty, feeling and propensity, so that each may be trained to its proper use only.

The importance of this is apparent in actual life,

both in regard to the happiness and usefulness of individuals and to society in general. Many familiar illustrations of this principle can be given, but particularly in regard to the maintenance of equanimity of feeling and proper self-control under the varying circumstances of actual life.

For example, much of our knowledge of external relations comes to the mind through the senses. Such knowledge is in relation to and is adapted to excite in turn the primitive feelings of every class. When active they form desires for gratification, and when gratified within certain limits render us contented and happy. The restriction over them is to be exercised by enlightened reason. When this is perfectly accomplished, the temper, expressions and conduct of the individual, are in accordance with propriety, truth, justice, benevolence, or simply good taste, as the case may be. When several of the feelings are active or in a state of desire for gratification, it is the office of intellect to consider the claims or the propriety of each, and to decide between them; and—if the decision is put in force—this is but an act of will, which is not a special faculty as is generally taught, but the application of reason, or the reflective powers, to our desires and notions, and is the basis of moral liberty in the subject. One of the most frequent occasions of unregulated impulse is to allow the defensive faculty of combativeness to give way to explosions of anger in the form of harsh words, or perchance, hard blows, when there is no just occasion to call it forth. Under proper training this feeling can be rendered subordinate to reason, or kept under control at all times. It may be used legitimately to give tone and proper vigor to the mind in the protection of individual rights; but what propriety is there in allowing it to take the form of

passion on slight occasions. For example, suppose an employé, through ignorance, stupidity or even neglect, should allow the machinery in his charge to go wrong, break down, and occasion delay and loss of time to owners and other operatives. The provocation to passionate expression and conduct thus given may be considerable to an untrained mind, but stop and think just how far matters will be mended by indulging the feeling in explosive words, in place of using the intellect in devising ways and means to overcome the difficulty. Every one under similar circumstances should say to himself, I will not allow my tranquility and peace of mind to be ruffled or destroyed by such an occurrence. This may be difficult at first, but if the man brings into exercise his self-esteem or feelings of self-respect, as to his conduct and language on such occasions, also his conscientiousness and firmness to assist him in the art of self-control, the power will soon be gained of holding at least the expression of his irritated feelings in abeyance. When it is all over, and in looking back upon the petty transaction, he will be rejoiced that his self-respect was maintained. This should be repeated once, twice, thrice, one hundred or one thousand times, if need be, to accomplish the object.

This is given only as a single illustration, though an important one of the necessity on the part of individuals, for cultivating equanimity of feeling and self-control under all circumstances of life.

It is also a fitting illustration of one of the important advantages of knowing the primary office of the several mental faculties and feelings, and of acquiring the ability to use or restrain each in turn, as the daily and hourly affairs of individuals shall require for happiness and success.

BEARING OF PHYSIOLOGY ON INSANITY OR MENTAL
DERANGEMENT.

In discussing this, for the present, the most important branch of my subject, I take the ground and use the language of Dr. Andrew Combe in his valuable work on Mental Derangement (not mental disease, a highly objectionable term) that phrenology has proved that the brain is an aggregate of many distinct organs, each manifesting a distinct mental power. It proves that one or more of these organs may be injured or diseased, and their functions impeded or altered, without necessarily affecting the remainder and thus explains how a man may be insane on one feeling or faculty, and sound on all the rest; and, consequently, how, when a different organ is diseased, the faculty or feeling that is deranged may be different and yet the disease itself remain exactly of the same nature. Inflammation affecting the eye disturbs vision, and affecting the ear, disturbs hearing, because vision is the function of the one, and hearing is the function of the other; but still it is inflammation in both, and requires in both the same kind of treatment. Phrenology shows that in like manner, morbid excitement of the cerebral organs of combativeness and destructiveness may produce raving violence and fury; and a morbid excitement of the organ of cautiousness produces fear, apprehension, despondency, and melancholy, not from any difference in the kind of excitement, but simply from the function of the one being to manifest the propensities first named, and from the function of the other being to manifest feeling of caution; and that hence, both cases may require the same medical treatment for their removal, modified only by the difference of function; and in so far it affords a simple and consistent explana-

tion of all the various forms which insanity assumes, and leaves us free to observe with care the nature of the organic derangement on which each depends.

Widely different from this is the mode of proceeding of those who ridicule the plurality of cerebral organs, and maintain the brain to be a unit, every part serving equally to manifest all the faculties. On this principle it is impossible to explain how it happens that in a majority of instances, a few only of the mental powers are deranged, while the others remain sound and untouched. For if the whole brain were the single organ of mind, every part of it ought to concur in every mental operation, and all the faculties of mind, of which it is said to be the instrument, ought in every case to be equally deranged, and the patient ought to pass in one moment from an abyss of despondency to the abodes of bliss, or from a state of listless apathy to that of demoniacal furor. We may be told that this is sometimes found actually to be the case, and no doubt it is so; but it is far more rare than that in which the mental affection is partial, and retains its characteristic features unchanged. The idiot, who to-day manifests the faculty of tune, the feeling of benevolence, of veneration or of self-esteem, will not to-morrow, nor in a year, change the nature of his predominant manifestations. In like manner the monomaniac, the feature of whose insanity is to fancy himself a king, or possessed of boundless power and wealth, will not to-morrow believe himself a slave, or in wretchedness and want. Nor will the rich lunatic, whose fear is of dying from starvation, manifest the gaiety and lightness of one who fancies himself the favorite of some supernatural power, as might have been expected had the brain been as a unit the organ of all the faculties. Sometimes, indeed, heterogeneous manifestations and rapid changes from

one class of ideas to another take place; but then, the whole brain, including, of course, all the organs, is diseased. This state, therefore, affords a true picture of the nature of insanity, such as it would necessarily be in every instance, if the mind were single.

To account for the variety of forms which derangement of so many mental faculties and organs may assume, the advocates of the unity of the organ of mind are constrained to create a new malady for every change in the appearance of the mental symptoms, and, following the wide variety thus presented, they conjure up a list of mental disorders numerous and complicated enough to damp the ardor of the most diligent and determined student, and at the same time running so much into each other as to defy all attempts at discriminating or describing them. Pathology is equally abundant in demonstrative proof of the plurality of cerebral organs. Partial idiocy—partial injuries of the brain, which do not affect all the mental faculties—insanity, affecting only one or two faculties—cases of apoplexy, followed by loss of memory of names, without apparent deficiency in other respects—and the occasional development of new powers by disease—are all at variance with the unity and in harmony with the plurality of cerebral organs.

Some object to the brain being considered as an aggregate of parts performing distinct functions—that this is impossible, because there is no visible partition separating them from each other; but the same objection having been erroneously urged against nerves, now demonstrated to be compound, shows how little weight ought to attach to our notions of what ought to be, when placed in opposition to what is. If we knew intimately the structure of the brain, and were minutely acquainted with the capabilities belonging to such

a structure, and founding on these, could show that two parts of the brain lying in contact with each other could not possibly perform distinct mental functions, then the objection would have weight. But if experience shows that the fact is the reverse, we are with due submission to divine wisdom, bound to believe that the respective organs *are* duly fitted for the perfect performance of the functions for which they were destined. There is in point of fact, also, a greater similarity between the different mental functions than between sensation and motion, and yet we find the nervous fibres performing the latter inextricably intermixed in apparently a single bundle. Again, although long disputed, it is now generally acknowledged, that the three nerves of the tongue subserve taste, motion and touch; and the difficulty is not greater in regard to the brain, than it is in regard to them, or to the spinal nerves; for it was inability to distinguish any boundary between their constituent parts that alone prevented their separate functions being sooner demonstrated. But the reasons which led to their being viewed as compound, existed in all their force long before the fact was ascertained, and were felt by many, and by none more than Dr. Spurzheim, to be as conclusive then as they are proved to be now, that is, was universally acknowledged.

In discussing the subject of mental derangement it is usual to speak at considerable length of the causes predisposing and exciting that produce it, or that precede an attack of the disease. On this occasion, and for the particular purpose of showing the relation or bearing of the physiology of the brain to this disease, as set forth in this article, I shall confine my attention mainly to the influence of the irregular and unequal development of the various regions and organs of the

brain, as disturbing causes, tending to produce an unsettled state of health and mind.

In a brain well and equally developed and with the faculties of various kinds equally well trained and strengthened, the tendency to derangement from mental causes are but few and slight; the individual in a state of health being able to make his way in life with scarcely a ripple to disturb the peace and tranquility of his mind. Unfortunately, however, the brains and minds of many individuals in whole regions as well as in the individual organs, are unfavorably developed, and thus naturally predisposed to irregular mental manifestation, and in some cases, to actual cerebral disease leading directly or indirectly to insanity, through their inability and want of fortitude to meet the responsibilities and bear the ills of life. This may occur with persons of moderate or weak intellectual faculties and with hopeful and ambitious feelings demanding gratification beyond the power of intellect to accomplish the desired and expected end.

While it is by no means claimed that insanity always originates from excess in the functional activity of the strongest or most fully developed organs, yet, this is frequently the case, as may be shown by examples of this kind. First, it may be stated that it is not difficult physiologically to understand how functional exercise becomes an exciting cause. When we use the eye too long, too intently, or in too bright a light, its vessels and nerves become too much excited and a sensation of fatigue and pain arises. If we continue its exercise the excitement increases, the vessels act with unusual force, and becoming distended with blood, give the membrane what may be called a blood-shot appearance, the surface of the eye becomes suffused with tears, the eyelids sore, and a feeling of

tension and weight which extends to the forehead, is felt. If we now turn away the eye, the irritation gradually subsides, and the healthy state returns; but if we continue to look intently, or resume our employment, before the eye has regained its natural state by repose, the irritation at last becomes permanent, and disease followed by weakness of sight, or even blindness may ensue, as often happens to glass-blowers, smiths and others exposed to work in an intense light.

In the same way if there be a part of the brain by which the mind feels the emotion of fear, it is easy to conceive how violent and long continued action of that part should first induce functional aberration characterized by unusual energy and vivacity of the corresponding feeling, and, ultimately, give rise to permanent disease or even change of structure in the organ, rendering its healthy action forever after impossible.

The mental phenomena attending such a process, would be first extreme anxiety, apprehension and terror from inadequate causes, corresponding to excessive action in the organ of cautiousness; and, afterwards, permanent melancholy and depression of mind, if the irritation in the organs was of a more durable character. But if the morbid change was so great as to impair the structure as in ramollissement, a suppression of the feeling of fear, and the consequent incapacity of acting with caution and prudence would be the consequence.

An example of this is given by Combe in the case of a gentleman whose faculty of circumspection had been in constant activity for several months, in directing the sailing of a pleasure yacht during a squally summer. By this constant exercise, the energy and activity of the organ had been highly roused, and the consequence

was, that on his return home, when it had nothing to guard against, and no legitimate way of exhausting itself, he found himself suddenly seized with nocturnal fits of terror and alarm, without even an imaginary cause, and these gradually abated as the excitement subsided.

Of the second kind, or permanent melancholy, we have everywhere too many examples; and of the suppression of feeling from change of structure in the organ, we have an interesting example in the Rev. Mr. N., who in consequence of apoplexy and ramollissement in the organs of cautiousness, became totally inconsiderate from having been cautious and prudent. He recovered so far as to manifest his intellectual faculties and religious feelings in a state of integrity; but his cautiousness was forever impaired, and so completely was he inconsiderate in feeling and in acting, that he was obliged to be withdrawn from public life.

If an individual naturally timid (or endowed with large cautiousness) and of an irritable constitution be exposed to sudden and appalling danger he may become insane, and the fright, in common language, is called the moral cause. Physiologically speaking, however, we would say that the danger is the natural stimulus to the organ of cautiousness, just as light is that which stimulates the eye, and that the over excitement of function thus produced has deranged the healthy action of the organ.

Functional excitement of the cerebral organs may arise in two ways, either from internal activity or from the stimulus of external objects. Sometimes an individual falls by insensible degrees into a train of feeling or thinking, which at first is characterized only by its intensity and frequency, but gradually increases in both of these respects until it becomes confirmed

monomania. Thus a man of a vivacious temperament and mechanical genius, will commence with great ardor constructing some piece of mechanism; he will then conceive the idea of inventing the perpetual motion and proceed with increasing interest and energy in his pursuit, till his conceptions shall become bewildered, this idea alone occupying the mind, and reason be displaced. The explanation is, that the organs of the constructive talents being naturally in excess in point of size, had at all times a tendency to preponderating action; that the first stage of this action was accompanied merely by great mental earnestness and vivacity in the pursuit, but that this functional activity, long and energetically operating in organs possessing an imperfect constitution, at last degenerated into settled functional derangement, or, in other words, into a form of monomania.

Pinel gives a case very similar to the above statement; and this is in truth the nature of the derangement which commonly affects poets, painters and men of partial genius.

Morbid excitement of the cerebral organs from the stimulus of *external* objects or relations, however, is still more common. Whatever causes deep emotion or excites intense and continuous thinking especially if the organs concerned are largely developed, produces the same kind of excessive and irregular action as the above. The same principles explain why insanity may arise sometimes from sudden presentment of an object about which the mind is deeply interested.

Pinel alludes to a family of three brothers in whom the domestic affections were very powerful. Two of them were marched off as conscripts, and one was soon after killed at the side of the other. The latter remained fixed to the spot like a statue; and

taken home in this condition, the impression made on the third brother was so powerful, that he also became insane. Here the violent action produced in the organs by the sudden deprivation evidently gave rise to a morbid affection of the brain, and to the insanity of both. But suppose, as an example of the other case, a most devoted mother to have received intelligence of the death of a beloved son to have regretted him long and deeply, but to have recovered some composure of mind, and that in this state he should suddenly present himself before her in health and strength. It is easy to conceive this new excitement although highly pleasurable coming forcibly and unexpectedly upon organs weakened by previous excessive action, rousing them to the uttermost, and leading to positive disease and confirmed insanity.

Such cases are rare, but they have occurred, and persons have been known to die even from excess of joy; a fact explicable only on the principle of excessive action being thereby produced in the material organ of the mind. From these examples it will be inferred by those who have had any experience of insanity, that its most prolific and powerful functional causes, are to be found in over-excitement of those faculties and organs, which are distinguished in their general predominance and power over the rest; and that it is comparatively rare to see it arise from over-action in any of the smaller organs such as many of those of the purely intellectual faculties.

When the morbid action extends so as to implicate sometimes a few organs and sometimes the whole brain, giving rise to a complication of symptoms proportional to its extent, but even then, the morbid activity is generally greatest in the largest organs, and con-

sequently its most prominent mental features continue to be those indicative of disturbance of the functions which those organs perform.

The cerebellum or organ of amativeness, is perhaps the largest of all the organs, and the frequency of disease and of insanity from abuse of its functions is known to every one; but madness from this cause is observed to occur chiefly, according to the principles already explained, in persons remarkable for high development and great energy of function of the cerebellum.

Nymphomania is another name for cerebellar disease, attended by functional excitement, but which is often erroneously supposed to have its seat in the uterus, or external organs.

Gall mentions the case of a very intelligent lady well educated, who was tormented from infancy with inordinate desires. Arrived at maturity she gave herself up to the gratification of her desires, but they only increased in intensity. She saw herself frequently on the verge of madness, and reduced to despair left her house and the city, and took refuge with her mother in a secluded situation in the country where the absence of exciting objects, the greater severity of manners and the culture of a garden prevented the explosion of disease. After having returned to town for some time, she was threatend with a relapse, and again took refuge with her mother. At her return to Paris, she came to me, and complained like a woman in perfect despair. Everywhere, she explained, I see nothing but the most salacious images; the demon of luxury pursues me everywhere; at table and even in sleep, I am an object of disgust to myself, and feel that I can no longer escape either madness or death.

Such is a picture of the deplorable state to which

irritation of the cerebellum conducts its unhappy victim.' In this instance Gall pointed out the cause to the patient, drew her attention to the enormous development of the organ, and advised her to return to the country, avoid all excitement, and apply leeches to the head, as the only means of saving her.

Sometimes, though rarely, the disease occurs where the organ and function are not in great endowment. As descriptive of this state, Pinel remarks: I have seen females the most remarkable for the purity of their manners, experience during an attack of mania this unhappy approximation to women of abandoned character, and regain in their convalescence their primitive character of reserve and extreme propriety.

Strong excitement of philoprogenitiveness (organ of love of offspring) is a frequent cause of insanity, as its organ is remarkable for size, particularly in females. Dr. Gall met with a curious instance of it in the great hospital of Vienna, apparently from excess of organic endowment. This patient conceived herself pregnant with six children, and as Dr. Gall expected, a corresponding predominance of development in the posterior lobe where the organ is situated. He was anxious to get possession of the woman's skull after her death. It was accordingly sent to him by the physicians, and the organ was found to be enormously large, so much so that the celebrated German physiologist, Rudolphi, tried to account for its size, by some supposed pressure, unwilling as he was to allow it to be a production of nature.

Sometimes the relation between over-excitement of the faculty and that of the organ is rendered still more obvious by local pain. Gall says: I attended some time ago the mother of a family in a state of delirium, characterized by intense anxiety and alarm about the

supposed murder of her children, and who, on being asked after her recovery, what her sensations were during the paroxysm, applied her hand to the region of this organ, and said that she was conscious of nothing except pain in that part of her head.

Dr. Burrows refers to an instance mentioned by Turnbull, in which a native of one of the South Sea Islands having had a child taken from her to make a sacrifice to a barbarous idol, went mad; and in consequence becoming very troublesome, her countrymen killed her. An occurrence of this kind among a savage people shows how powerfully the brain may be irritated through the medium of the organ by which this feeling is manifested, and there can be little doubt but that puerperal madness is sometimes partly to be ascribed to the same cause, operating upon a very excitable state of the nervous system.

The organ of *adhesiveness* is another of very considerable size, irritation of which is consequently a frequent cause of insanity. Probably a large proportion of the cases which are said to arise from disappointed affection are ascribable to derangement of the function of adhesiveness. The activity of this feeling gives a warmth of attachment that can be satisfied only by the warmest return; and if it is glowing on one side, and not on the other, the effect, especially when the influence of *amativeness* is combined with it, is to create an indescribable craving or unsatisfied state in the faculty, which is soon followed by ennui, disgust, low spirits, a desire for solitude, and ultimately, complete derangement of mind. In this case *amativeness* adds to the flame; but, without the attachment, *amativeness* would not interest itself in any particular object.

Pinel relates a very curious case of derangement from

an affection of adhesiveness, and which is doubly interesting, phrenologically, as showing how intense excitement of that organ gives rise to excitement in those contiguous to it. A lady of rather a melancholy character, on the death of her father, rolled herself on the ground, tore her hair, and uttered imprecations against universal nature, and in her despair, sighed for the utter destruction of the human race. Is it not from the contiguity of the organs of adhesiveness, combativeness, and destructiveness that domestic dissensions are generally the most bitter and irreconcilable of any?

From over-stimulated acquisitiveness, a functional cause, there are many cases of derangement in all ranks of life. Over-stimulation of the organs of conscientiousness and veneration joined to cautiousness give rise to that deplorable form of melancholy, in which the patient is so overwhelmed by the sense of his guilt in the sight of God that he can not for a moment turn his mind to the hopes held out in the Gospel to the repentant sinner, but passes his days and nights in the deepest remorse insensible to every other impression.

The organs of combativeness and destructiveness are among the largest in the brain, and the unrestrained gratification of these cravings is a frequent functional cause of derangement. Bursts of passion and irascibility of temper (says Pinel) are often the preludes of insanity, and strongly favor its invasion.

There are many remarkable cases of insanity reported from over-excitement of these organs, while there are a still greater number of cases of general mania in which the over-excitement of these organs form a prominent and most dangerous part.

From over-excited and deranged self-esteem we have exhibitions of pride, jealousy, arrogance and the spirit

of domination. In one instance a patient gave his orders with the tone of an Asiatic despot, and ended by conceiving himself Chancellor of England, Duke of Batavia, and a powerful monarch.

Inordinate excitement of love of approbation is frequently a functional cause of derangement, particularly where ambition and the desire of distinction are naturally strong ingredients in the character. From this proceeds the most extravagant manifestations of vanity.

I forbear, however, to tax the Association with the detail of cases, of which every institution for the care of the insane have many examples, and which tend to show how closely connected is the comprehension and treatment of insanity with the physiology of the brain as set forth in the system of Gall and Spurzheim.

Though I have not spoken of the connection or relation of the intellectual faculties to the affective when the latter are deranged, through disease of their several organs, yet it should be understood that a state of insanity and irresponsibility does not exist until the intellect is deceived or deluded in regard to the subjects to which the diseased organs relate, when in a state of health. For want of time and space I omit allusion to the more general and mixed forms, or rather examples, of insanity, to the subject of the responsibility of the insane, and to its medical, mental and moral treatment.

A VISIT TO GHEEL.

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Gheel, the centre of the insane colony of Belgium, of which so much has been written, is a town of ten or twelve thousand inhabitants, situated about thirty miles from Antwerp, in a half barren stretch of moorland known as the Campine or Kampenland. The town itself is very unattractive. Nearly all the houses are alike, being of stucco, whitewashed, without porches or embellishments of any kind, and the streets have neither sidewalks nor shade. In fact, in the language of Dr. Peeters, it is "very monotonous and very tranquil, without commerce and without industry."

The insane cared for under this "family system" number about seventeen hundred, about five hundred being in Gheel, while the remainder are distributed through a district of some thirty miles in circumference, divided into four sections, each with its separate physician and guard.

Almost every one is familiar with the legend which relates how the Irish princess Dymphna, who, after being converted to Christianity, sought refuge in Gheel from the incestuous love of her heathen father. Her confessor was the companion of her flight. The relentless father, with his soldiers, pursued the fugitives, and finding them in Gheel, put them to death, he himself beheading his daughter. Gradually the belief arose among the superstitious inhabitants, that the tomb of the unfortunate princess possessed miraculous power in healing "the mind diseased," and soon numerous pilgrims came from afar to pray at this Mecca where she

had offered up her life to escape the fate which years later befell Beatrice Cenci.

How this belief originated is not satisfactorily explained. One theory is that it would be but natural for the virgin martyr to be invested with some such power, while another is that an alien who witnessed the beheading suddenly recovered his reason. At all events, St. Dymphna became the patroness of the insane. Despite the obscurities of this legend the memory of the saint has been faithfully kept alive in Gheel, and the whole town is filled with reminiscences of the sojourn and the death of the daughter of the Irish king. Even in the present day an annual fête is held in her honor, when numerous relics are exhibited to extraordinary numbers of the curious and devout.

Near the centre of the town is a painted group in stone representing the father in the act of beheading the supplicating daughter, while Satan is just peeping up behind. This group is set in an alcove in the walls of an old hospital, which was formerly used for the reception of cases of contagious disease, and is protected in front by an iron railing. On the sides of three walls there are various inscriptions in Flemish, among others one which states that St. Dymphna was beheaded by her father on that very spot on the 30th of May, in the year 600. But most prominent of all is the one beseeching the prayers of holy Dymphna. This same request :

“O. H. Dymphne
Bid voor ons,”

is seen in other places and gives us some idea of the implicit belief in her power as well as in the origin of the present system.

The fame of the shrine spread rapidly and finally a large and beautiful church was erected to her

memory on the site of St. Martin's chapel which existed in the seventh century. This church was begun in the twelfth century, and finished in 1340, and it still stands to bear witness to the importance formerly attached to the shrine. The altar contains the apotheosis of the saint, and the pavement underneath shows deep furrows worn there by the knees of the hopeful enthusiasts "as they made their manifold transits on nine successive days."

Although the date of the inception of the present system is not known, it is a well established fact that at least two hundred years ago a religious institution for the care of the insane existed in the town. The patients came from all parts of the country, and went immediately to the church where some curious old rooms, adjoining, with heavy doors and iron bars, may still be seen. The church, with its limited rooms, soon became too small for all who sought for aid, and, as many of the unfortunate ones who had not been cured during the first nine days returned for a second trial, the inhabitants of the town were obliged to furnish them with food and shelter. In this way the simple villagers became accustomed to the care of the insane and found that they did not always need chains and bars as was then generally supposed. Thus the system little by little grew to importance.

When M. Pontecoulant was appointed by Napoleon, Prefect of the Revolution Department of the Dyle, his attention was called to Gheel, and, as the insane in the asylum in Brussels were then in a sad condition, he caused them all to be removed from the capital to the little country town. This of course gave the place much prominence. Abuses gradually crept into the system and M. Ducpétiaux, inspector general of benvolent institutions in Belgium, began investigations

in 1850, which resulted in many reforms, and on May 1, 1851, a law was passed defining the relations between the patients and their protectors. Since then amendments have been made from time to time.

On the 15th of July, I visited this interesting place and was very kindly received by Dr. Peeters, the chief medical officer, who personally conducted me through the *Infirmérie* and willingly answered my numerous questions.

In my visit to the various houses, I was accompanied by the guard of the division. He has been connected with the colony for many years, and I found him intelligent and anxious to furnish all the information asked for.

The *Infirmérie* is situated on the outskirts of the town, and was built in 1861, to take the place of a little building in the village which had before been used for hospital purposes. It is capable of accommodating about sixty patients, and no one, unless in very weak physical condition, is kept there for more than eight days, as at the weekly meeting of the committee, all suitable cases are placed under the care of a *nourricier* or *hôte*.

The *Infirmérie* needs no special description as it is only the "family system" which is peculiar and of unusual interest.

At the outset, it may be well to state that a careful selection is made in regard to the patients sent to Gheel, it being the intention to there care for only harmless lunatics. Those with suicidal, homicidal, incendiary or other dangerous tendencies are sent to one of the ordinary Belgian asylums. If by chance a dangerous person is sent to Gheel he is transferred as soon as the fact is ascertained, and *vice versâ*, when the superintendent of any of the other asylums is satisfied

as to the harmlessness of any of his patients, the transfer to Gheel is made. This is not the only mode of admission, however, as patients are admitted directly into the colony without having been in other asylums.

The inhabitants of the village depend for their support almost entirely upon their incomes derived from caring for the insane, and in the majority of houses from one to three patients may be found. No more than three patients are permitted to be cared for in any one house, and the two sexes are not supposed to be cared for in the same dwelling. To this latter rule, however, I found one exception, a male idiot and a female lunatic being cared for by the same family. This naturally suggested the question of the possibility of improper relations between the two sexes as a result of the system, and I was told that during the past thirty years, in five or six instances, female members of the colony had given birth to children. To do justice to the male patients, however, it is necessary to state that the crime in some of the cases referred to was traced to the sane residents of the town.

Suicides and acts of violence, I was informed, are rare owing to the discrimination in regard to the reception of cases with such tendencies.

It is the endeavor of the authorities to carefully select the *hôtes* and *nourriciers*, and a license to receive patients is only granted to those supposed to be worthy of confidence. The two terms *hôte* and *nourricier* have a different significance, the former receiving only private patients while the latter cares for the indigents. When the care of a patient is assumed by a *hôte* or *nourricier* he is furnished with a book giving the patient's name, age, date of admission, the amount to be paid for his care, etc. In this book an account is kept of all the articles furnished to the

patient, and the physician must also enter his name and the date of every visit, which in chronic cases must be as often as once a month, and in cases recently admitted or supposed to be curable once a week or oftener if necessary.

Patients are transferred from the care of one *nourricier* to that of another whenever circumstances render it advisable.

The patients are divided into two general classes—*Pensionnaires* and *Indigents*. The first, of whom there is less than ten per cent, are supported by their friends, while the second are supported as public charges.

The *Indigents* are again divided into three classes—

First. Those who are clean, in good physical condition, and partly able to pay for their care by the work which they do for the *nourricier*. For this class a charge of eighty-four centimes per day (about seventeen cents) is made. Sixty centimes go to the *nourricier* for board and care while the remaining twenty-four are divided about equally between the clothing account and that of administration and medical attendance. This is the average proportion of the division of the income from public patients.

Second. Those who are not so well able to work, and who are occasionally filthy. This class is comprised chiefly of demented and idiots, and a charge of ninety-four (94) centimes per day is made for their board and care.

Third. Those who are filthy and totally unable to work. For the care of this class a charge of one franc and ten centimes per day is made.

The *pensionnaires* pay various prices according to circumstances, ranging from that paid by the *indigents* to, in very exceptional cases, six thousand francs per annum. An additional sum of eleven per cent of the

amount paid to the *hôte* must be paid into the fund for the maintenance of the administrative and medical service.

I shall make no attempt to describe all the houses I visited as it would involve too much repetition, many of them being very similiar, but shall merely try to give some idea of the several classes.

The first was a modest, unpretentious village dwelling. The door was opened by a talkative old woman who wore a clean, white apron and cap, but no shoes. She had but one patient under her care—a general paralytic in the second stage. The house, though very plain, was neat and well kept, and the bed-room and bedding were clean. The patient sat listlessly in a chair, taking no notice of anything, and he could not be engaged in conversation. I wondered what could be done with him when he became helpless and filthy. In response to the question, I was told that he would probably stay there and was assured by the woman that she had had such patients before, had managed them without difficulty, and had kept them clean. When one remembers how difficult the accomplishment of this sometimes is with such patients, even with all the conveniences of a modern asylum, her statement may be fairly questioned. She received twelve hundred francs per year for his care, and he was classed among the second class private patients.

The second house contained three patients who paid three thousand francs each per year. It was much more pretentious than the first, and was surrounded by pleasant grounds, a feature quite unusual in the village. The gate leading to the house was locked, and it would have been very difficult for a patient to get over the fence into the street. In explanation of this it was said that the occasional excitability and

tendency to escape on the part of one of the patients rendered this precaution necessary. Of the three patients one was an Englishman, one a Polish prince, and one a Frenchman. Two appeared to be quiet, harmless lunatics, while the third was melancholic, sullen and irritable, and subject, it was said, to periods of excitement. The house was in charge of a man and wife and daughter, although during my visit the man was not to be seen.

In the third house was an old Irish woman who had been in the colony five or six years. She was quite demented and had but an indistinct recollection of past events. Her room was fairly comfortable, it being probably as good as she would have had at home had she been sane. It was, however, much inferior in every respect, to the ordinary asylum quarters. When questioned she expressed herself as being satisfied with her food and treatment, and said that she was quite contented. Her mental condition, however, was not active enough to make her fully appreciate her surroundings or the questions asked her. She paid five hundred francs per annum.

In the fourth house there were two patients, and both were Englishmen. The woman in charge had been caring for the insane for twelve years, and spoke good English. I only saw one of her charges, apparently a harmless, talkative lunatic, whose counterpart might be found in any asylum. He thought that he possessed great artistic ability, and spent a great deal of his time in going about the country making worthless sketches. He railed against the system, much as lunatics of his kind rail against asylums, and declared his intention to write an *exposé* of the whole affair at some future time. He claimed that he could have just as much liberty in any modern English

asylum as he had in Gheel, an assertion in which he was probably right. The house and charges were similar to the one just described.

The next house which I visited was quite different from any of those mentioned. Leaving the main street we turned into a narrow alley and entered a low, one-story house with brick floor and unplastered ceiling. It was not as clean as it might have been; the odors were not sweet, and the sanitary conditions seemed very poor. In fact it was the hovel of a laborer. The patient, an epileptic idiot, perfectly helpless from deformity of the feet and unable to speak or to feed himself, slept in a corner of the room, which was also used as a kitchen and sitting room for the family. His bed and bedding were in keeping with the place. For his care ninety-four centimes per day were paid.

The next house, near by, but facing on the main street, was quite similar, and the patients were two idiot girls who were utterly unable to appreciate anything.

The persons in charge of these houses were of a lower order than any I had before seen, but they seemed to appreciate the object of my visit and appeared anxious to make a good impression. That, however, was an impossible task, as this part of my visit was anything but pleasant, and sufficiently disagreeable to destroy all the favorable impressions of the first.

I learned that but few idiots were cared for in this section, which was intended for the better class, and that all but about ten were cared for in the other divisions.

Of course in such abodes as those just described, one could not expect to find facilities for bathing, and this appeared to me to be one of the most serious defects of the system. Those who are able and near enough are expected to go to the *Infirmérie*, at stated intervals, where there are bath-rooms, but the fact still stands

that the facilities for bathing are totally inadequate, and that there are hundreds in the colony who are entirely deprived of this important therapeutical and hygienic measure. Dr. Peeters has called attention to this deplorable condition, and has urged the necessity of the erection of suitable bathing-houses at convenient points. It is to be hoped that his suggestions may be soon adopted.

The food furnished the patients I did not see, but I was told that it was sufficient, though plain, it generally being the ordinary fare of the people with whom the patients live, consisting principally of coffee, bread, potatoes and pork.

My time was too limited to permit of a visit to the other sections, but as I was assured that I saw the better class, and enough to give me a very good idea of the system, my conclusions can not, therefore, be unfair, or do injustice to any one.

The patients whom I saw were, with one exception, either harmless chronic lunatics, who could have been accorded just as much liberty in any well-managed asylum; general paralytics and demented who had no appreciation of their condition; and chattering epileptic idiots, to whom certainly homelike surroundings were of no account. Even admitting that the first class are as well or better off in families than they would be in an asylum, I must enter an emphatic protest against caring for the second and third classes under such a system. To make use of the sentimental argument that such patients are happier under surroundings which most nearly approach home life is puerile, for, as has been said, they are not in a condition to appreciate their environment. And to claim that they are as well cared for in houses without any of the modern conveniences, by those whose intelligence, in some cases, seems but little above their own, as they would

be in a well-managed, well-constructed hospital under the immediate care of watchful physicians and skilled attendants, I can not believe to be the case from the evidence which my visit gave. I would not be understood as making the slightest insinuation against the skill or fidelity of the physicians in charge of the colony, but when there is but one physician to four or five hundred widely scattered patients, and when his visits are necessarily as infrequent as once a month, or even once a week, it is but natural to suppose that the humble people to whose honor, integrity and judgment so much is entrusted, may sometimes become careless and indifferent to the wants of their troublesome and helpless charges. We could not expect anything else from human nature. It is true that the guards make more frequent visits, but they can not be said to in any way compare with the daily or semi-daily visits of the medical officers in any well-managed asylum.

From an economical view the "family system" has some advantages, although they are not so great as they at first appear, as the *pro rata* cost of the support of the patients in the other Belgian asylums is much less than it is with us, and but little in excess of that at Gheel. From any other standpoint I do not think that any advantages can be justly claimed, as I am sure that I saw nothing in Gheel to lead me to believe that either the happiness or the comfort of the patients was in any way increased.

This plan has been tried to some extent in the north of Scotland, and I was told by those familiar with the subject that it had not proved as satisfactory as its projectors had supposed it would.

During my visit to Gheel I tried only to see things as they actually existed, and I regret my inability to speak favorably of all I saw, as it is much pleasanter to approve than to condemn.

SENILE MELANCHOLIA: ITS CHARACTERS AND PATHOLOGY.

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My object in this paper is to direct attention to an interesting form of insanity which may conveniently be called "senile melancholia," and to suggest a few thoughts as to its developmental pathology.

The condition may be described briefly as "a restless type of intense psychalgia, accompanied usually by fixed delusions, inedia, and thoracic organic lesions." In degree it is acute; in duration, chronic; whilst in many ways resembling certain stages of ordinary acute melancholia, it has nevertheless proper characters. The patient is as a rule thin, pale and haggard, and presents the general aspect of one in whose course through life, monotonous labour, difficulties and adverse events have reduced pleasure and ease to a negative quantity. In order satisfactorily to depict the symptoms of the mental disease, I can not do better than to describe briefly a case under observation in this asylum at the present time.

The patient, A. W., is a woman sixty-two years of age, a maker of nails. She is married and has five children. There is no neurotic heredity. Her work through life has been constant, of an extremely heavy and wearying nature, and badly paid. On admission here twelve months ago her weight was extraordinarily little, viz., 61 lbs.; it is now however 91 lbs. Her hair is grey, her skin wrinkled, and there is well marked *arcus senilis*; her muscles are all much wasted and she

looks much older than she is. Her face wears an expression of anxiety and terror, whilst it betokens weariness and exhaustion. She is markedly anæmic. Physical examination of her lungs reveals a general bronchitis of the smaller tubes; she coughs a good deal and when the weather is cold expectorates large quantities of aërated pus. Her heart is dilated, irregular and feeble, and there is a mitral systolic bruit. Her abdominal signs are normal; tongue pale and flabby and digestion imperfect. She is extremely depressed and deluded; believes that the devil is murdering her children day after day, and burning their corpses, because she, against his orders, takes food (or rather is fed by the nurses). When a meal is brought her, she will say: "No! No! my good creature, you don't know the misery it will bring; I can hear them screaming as he cuts them up, and can smell their flesh a burning; No! take it away; how can you be so cruel as to make me take it when the devil says I must not?" This is her tale day after day; her one desire is to be left to starve. She is generally aware of her insanity; she will say, for instance, during conversation, "I know my mind is very bad; but oh! you don't know the misery—it is worse than any man or woman ever suffered; can't you cure my mind?" She was taken one night to the weekly entertainment, but she groaned and wrung her hands the whole time, and said when she returned to the ward "it will all bring misery; that singing and dancing and clapping will make the devil heat his fire all the hotter to burn my poor children." Sometimes she jumps out of bed and runs up the ward screaming out "Oh! hark at my children—he's killing them, I know he is," whilst she trembles with terror. The sight of a nurse bringing her food often causes her to become intensely agitated, and to yell at the top of

her voice. She has many curious illusions; fancies, *e. g.*, that a railway whistle is the scream of some beast, and that the tramping of feet in the passage near, is a thunder-roll to destroy her children.

The treatment adopted has consisted of an abundant, easily assimilated diet; and hæmatinics, tonics, stimulants, sedatives, &c., have been given as occasion required. In spite, however, of the most careful nursing, and an occasional temporary improvement, her case will probably go on to a fatal termination; bronchitis and cardiac dilatation will end the scene. Such then are the symptoms which, varying in their details, are presented by cases of Senile Melancholia.

Professor Humphrey, of Cambridge, in an address recently delivered before the Medical Society of London, said: "——the main feature of the 'descending development,' the development from maturity onward, is a lessening of material, a lessening of activity and a lessening of strength, * * * *
—and it is upon the well-ordered, proportionately or developmentally regulated decline in the several organs that the stages which succeed to maturity are safely passed, and that the crown of physical glory, a healthy old age, is attained." Given an imperfection in the functional achievements of one, and the functions of all the organs become imperfect in effect, their resultant falls below the normal, the health fails, the life is imperfect. In the case which I have cited above the sequence of events seems to have been this:—hard toil, pulmonary troubles, cardiac disease, imperfect nutrition and deficient oxygen supply to the brain, mental alienation. It would seem that, in these cases, the normal developmental processes of old age are interrupted; the balance of events amongst the nervous and general organs is disturbed, and things

can not take their normal course. The subjects of Senile Melancholia are usually persons prematurely old; they look older than their years, and their physical condition generally is far advanced in the "developmental" degenerations of old age. These degenerations are usually accompanied in the normal course of events by intellectual asthenia, and frequently by a dementia ultimately so profound as to render the individual quite childish in a blissful ignorance. Is not this dementing process as surely developmental in its nature and physiology as are the changes that accompany old age in the various tissues, and as is the normal lessening of the activity of the general organic functions?

Some hold as a truth that the supremest happiness consists in absolute unconsciousness; and there does seem to be a certain tendency towards such a strange theory in the passive happiness of age. The aged man who sits in his chair peaceful and quiet, knowing little of the events of the present, unable to worry about the future, smiles as he hears or tells of the far off years; the bereavements of later years and even of middle life do not any longer trouble him; he can only recollect the bright days of his youth and childhood. It is a question, whether even such a state is not associated with more of "happiness" than is one of complete unconsciousness. Whilst this last stage of conscious life, this stage of the gradual death of the intellect may be objectively imperfect and even unenviable, still the probabilities are that it is subjectively the best for the man; it is "developmental." It were not well that he should retain the full mental vigour of maturity and lose, as he must do, the physical strength and ability to fulfil the promptings of his mind; the two things are incompatible if a "happy" state is to result.

If then, the decline in the several organs be "developmentally regulated," the final mental state, the stage which precedes death, is dementia. When the degenerations occur prematurely, when one organ, such as the lung, becomes chronically disabled and the respiratory and circulatory systems fall short, as a consequence, in their achievements, the balance of power is upset; some organs and tissues are just entering on the downward changes, whilst others are twenty years in advance of them. Thus it may be that Senile Melancholia is evolved. The mental faculties may be still active and may yield their supremacy obstinately, whilst physical strength and health are rapidly failing; there may be still abundance of power to think, abundance of power to will, but a sad deficiency in the mechanical media of action; and at last the "mind" gives way. The changes in the mental functions are not gradual, easy, physiological; they are rude in their method and abnormal in their amount; perversion replaces gradual diminution. The individual feels to be slipping from his grasp the power of maintaining a normal correlation with surrounding matter. There is repeated in fact in the "descending development" of the mental functions, the same loss of balance which has occurred in the general; and all this militates against a feeling of happiness. The patient is failing in general, and failing in mental health, but the failure is not in a normal ratio. He ought to be hardly conscious of his dwindling strength, nor should he notice the growing senile weakness of his mental faculties; he should pass gradually, unconsciously, and without regret into a dementia. Not so, however, in the cases under consideration; a knowledge of the grave state of things is clear; the patient knows his days of usefulness and

activity are over; he feels his mind yielding to the weight of trouble and increasing physical incapacity, and is even aware at last of his actual insanity.

What seems more probable than a condition of mental pain? What more natural than the substitution for normal dementia, of the abnormal melancholia?

In a short paper in the *Lancet*, 1884, I discussed the relations between melancholia and diminution of the oxygen supply to the cerebrum, and mentioned as a matter of every day notice the fact that recovery from ordinary melancholia depended largely upon the presence or absence of lesions, productive of anæmia or of imperfect circulation. The presence of such lesions is frequent amongst cases occurring in old age; as, however, in an old person they are of a degenerative and progressive nature, and can only end in death, so also, Senile Melancholia (with very few exceptions) terminates either in the mind's own grave, dementia, or more frequently in the general dissolution.

CLINICAL CASES.

NOTES OF A CASE OF CEREBRAL TUMOR.

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The following case is of interest, both from the vagueness of the clinical symptoms and from the rarity of the position occupied by the tumour.

R. McC., æt. 68, of Irish extraction, was admitted to this asylum on 26th December, 1884, suffering from melancholia, this being his third attack of insanity. With respect to his previous history little is known, except that the supposed cause of his first attack was a blow on the head, but this occurred at least 44 years ago. In 1879 he was under treatment in this asylum for seven months, suffering from a mild attack of mania, when he was said to be eccentric, and to have delusions of bodily weakness. Nothing to indicate cerebral disease was found at this time.

State on Admission.—He was a miserable and dirty looking old man. Mentally he was dull, confused, and would scarcely speak; his expression was foolish, conversation hardly coherent, and his memory somewhat impaired. The superficial skin reflexes were diminished, pupils equal and contractile, and the movements of his tongue were normal. With the exception of some slight bronchitis no active physical disease was detected on examination. Pulse 92. Weight 119 lbs.

Progress of Case.—*Dec. 31.*—He is restless and will hardly remain in his bed during the night. Mentally he is in a dull and stupid condition; his speech is

incoherent, he understands little of what is said to him, and he takes no notice of what goes on around him.

January 2.—Although he is looking a little better in health, there is no improvement in his mental condition.

January 12.—He does not look so well to-day; his gait is unsteady, and he lies in a stupid state and can not be roused; evacuations are passed involuntarily. Although the pupils are equal, he looks as if he had had a paralytic seizure. A few crepitations are heard at bases of both lungs, but there is no marked dulness on percussion.

January 29.—Since last entry he has become more demented; his speech is thick and less coherent than it was, and, as he is unable to stand by himself, he is now quite bedridden. He occasionally suffers from hiccough.

February 10.—He has slight attacks of vomiting, which are always followed by protracted hiccough. No mental change to report.

February 20.—Patient is daily becoming more feeble, taking scarcely sufficient food and requires feeding. He is restless, dirty and destructive in his habits, constantly picking either his skin or the bedclothes. The chest symptoms, which had for a time disappeared, have again become prominent.

March 2.—He lies in a listless, semi-comatose state, and can scarcely be roused to take his food. Yesterday afternoon he had a series of "quivering fits," affecting both arms and legs. During the fit his eyes remained open, and he seemed in a less drowsy condition than at other times. He is looking much worse to-day and a bed sore is beginning to form over the sacrum.

March 8.—General clonic convulsions have been more or less constant since last entry, but in a slighter degree. He is becoming more feeble and collapsed,

taking no food, and on several occasions looked as if he were dying. The pupils are sluggish to the influence of light, but equal in size. The coma rapidly deepened and death occurred this evening.

Autopsy—37½ hours after death.

The body was somewhat emaciated; rigor mortis present; there was a small bedsore situated over the sacrum.

Head.—The skull-cap was hard but thin: diploë for the most part absent. The dura mater was firmly adherent over the vertex; it was thick and leathery in consistence. The posterior and lateral sinuses were filled with semi-clotted blood. The cerebral arteries, especially those at the base of the brain, were thickened and remained patent, but were not markedly atheromatous. The pia mater was now adherent; the outer portions of the brain were hyperæmic on section. On separating the two hemispheres a large infiltrating growth, about the size of a pigeon's egg, was found occupying the anterior half of the two lateral ventricles. The tumour was above the level of the optic thalami and corpora striata, but did not involve them, and although the new growth rested on the floor of the ventricles, it was possible to pass the finger inferiorly and laterally along the whole of the ventricles forwards to their anterior cornua.

The tumour involved, and appeared to grow from, the anterior portions of the corpus callosum and the corresponding part of the fornix. Fully one-third of the growth was anterior to the callosal body, involving the white matter of the frontal lobe, but did not reach its grey matter. In this portion there was no definite limit between the tumour and the surrounding brain tissue, which was soft and in places breaking down. Both hemispheres were apparently involved to a similar

extent. The tumour itself was of a dirty yellowish brown colour, highly vascular, lobulated on its free surface, hard to the feel, crisp and almost cartilaginous on section. Some portions, more especially towards the centre, were softened and apparently breaking down, and the anterior part had a honeycombed or cribriform appearance. The ventricles were scarcely, if at all, distended, and did not contain an excess of fluid. The cerebrum, with the above exceptions, was quite healthy, and upon an external examination of the brain there was no evidence of the presence of a tumour, nor was there any atrophy or want of symmetry in the convolutions.

The cerebellum, pons, and medulla were somewhat congested, but otherwise appeared normal. Weight of brain, 55½ oz.

The large intestines were considerably distended and contained masses of hard fæces.

Nothing worthy of note was observed in the other viscera.

Microscopic Examination of the Tumour.—The tumour appeared to be made up of three essential constituents: (a.) Small round corpuscles with granular contents about the size of a white blood corpuscle, staining well with carmine and logwood. (b.) Larger sized cells presenting several nuclei, which were not so markedly affected by the carmine, but stained well with the hæmatoxylin dye. (c.) Numerous spindle-shaped cells arranged in some places longitudinally and closely packed together, and in other portions of the tumour scattered irregularly among the other cells, or forming alveolar spaces, many of which were filled with one or other of the cellular constituents of the tumour. In addition there were many irregularly shaped cells probably embryonic or undeveloped spindle cells. Fat

globules were here and there interspersed through the section, and there were a few minute particles of pigment—of a deep brown mahogany colour—in the neighbourhood of the vessels.

In many of the smaller arteries there was a cellular infiltration occupying a position between the muscular tunic and the outer fibrous covering of the vessel; the cells forming this infiltration were rounded in shape, and presented similar characters to the cells which made up the mass of the neoplasm. The vessels thus affected had their walls much thickened, and in some cases the muscular coat appeared to be entirely replaced by cellular elements. What apparently was a more advanced stage of this process was the gradual encroachment of the thickened walls upon the lumen, so that in many of the vessels the lumen was entirely obliterated, and the arteries thus affected had the appearance of solid fibrous bands.

The tunica intima of the larger arteries was wavy in outline, and many of the vessels were filled, some even crammed, with hæmacytes. There were many apparently developing vessels both in the cellular infiltration between the arterial coats and throughout the section generally.

In sections taken close to the healthy portion of the brain, the tissue in the neighbourhood of the tumour had a granular appearance, and was evidently breaking down. The tumour itself was highly vascular, although many of the arteries were quite obliterated.

Nothing unusual was observed in the minute anatomy of other portions of the brain which were examined.

Remarks.—It is to be regretted that during the life of this patient the presence of cerebral tumour was not suspected; hence I am unable to give the results of an

ophthalmoscopic examination. From the microscopic appearance the tumour was apparently sarcomatous in structure—the glio-sarcoma, or hæmorrhagic sarcoma, as described by Dr. Ross,* and the compact arrangement of the spindle-cells was no doubt the cause of the dense consistence the tumour had on section.

The position occupied by this growth is somewhat rare, and in the literature to which I have had access, I can only find the record of three cases in which the tumour occupied a similar situation. These cases were reported by Dr. Bristowe,† and although they presented symptoms in many respects not unlike those described above, there were some points of difference to which I shall refer. According to Bristowe the following were the more prominent symptoms presented by his cases: (1.) The gradual appearance of hemiplegia with slight paresis of the opposite side. (2.) The supervention of drowsiness and stupidity with difficulty in swallowing and impairment in speech. (3.) An absence, or nearly so, of headache or sickness—symptoms so common in intracranial tumours occupying other positions. (4.) All his cases terminated in drowsiness, passing into stupor, coma, and death without convulsions.

Comparing these symptoms with those presented by the case recorded above, we find that: (1.) Instead of hemiplegia there was a gradual onset of paraplegia—a paralysis not only affecting the limbs, but also the rectum and bladder, as shown by his loss of control over these viscera during life, and the distended and lax condition of the lower bowel found after death. (2.) The patient was stupid, demented and gradually became more and more drowsy; and although his utterance was thick and sluggish, it was never remarked

* A Treatise of the Nervous System, Vol. II., p. 554.

† "Brain," October, 1884, p. 315, et. seq.

that he had any difficulty in swallowing when he could be roused sufficiently to take nourishment. (3.) He suffered from severe sickness, but never made any complaint of headache; and there was, in the later stages of his illness, troublesome and protracted hiccough, which succeeded upon, and lasted for some time after, every attack of sickness—to this latter symptom Bristowe does not allude. (4.) In the presence of convulsions antecedent to the fatal coma the case differs from those described by Dr. Bristowe, for upon the absence of convulsions he lays some stress.

In cases of cerebral lesions, an explanation of the phenomena exhibited during life is to be found in the portion of brain implicated in the disease; and, from a study, clinical and experimental, of the localization of cerebral functions, we are often enabled to arrive at a fairly certain diagnosis in any case.

The corpus callosum—that portion of the brain most affected in this case—as “the great transverse commissure connecting corresponding regions of the cortex of both hemispheres” (Ferrier)—occupies the position of a centre through which nerve impulses pass from the cortical portion of the brain to the peripheral nerves, and interference with its functions from any cause must necessarily result in loss of power equally on both sides. The thickness of the patient’s speech may be explained by ascribing it to paralysis affecting the muscles of articulation, such as the tongue, buccal and labial muscles; distinct aphasia was not present, and there was no direct involvement of Broca’s convolution.

The differential diagnosis of such a case is somewhat difficult; thus it might be mistaken for hæmorrhage into the callosal body, but, according to Bristowe, its later progress would be sufficiently suggested to the

physician. Lesions affecting the medulla oblongata or its neighbourhood bear some resemblance in their symptoms to tumours implicating the corpus callosum, but early interference with the respiratory, as well as other vital, centres should assist us in our diagnosis.

There might be some difficulty in distinguishing between tumours in this position and some forms of general paralysis, but the inequality of the pupils and other symptoms so generally found in the latter disease ought to help us. It is difficult to say whether the injury sustained to this patient's head forty-four years ago had anything to do with the growth of the tumour: the long period of time elapsing between the injury and the onset of the symptoms renders it improbable that there was any relation between the two as to cause and effect.

TWO CASES OF OÖPHORECTOMY FOR INSANITY.

BY E. D. BONDURANT, M. D.,Assistant Physician to the Alabama Insane Hospital, Tuscaloosa, Ala.

CASE I.—M. M. was admitted to the Alabama Insane Hospital August 23, 1871, being then thirty-one years old, married, and the mother of four children. Of an inherited nervous temperament and since puberty had suffered from frequent attacks of hysteria, generally occurring at her monthly periods, and being aggravated by any casual derangement or irregularity of the menstrual function. In 1868 one of these attacks, of unusual violence and duration, was followed by slight and transient mental aberration, from which patient recovered without treatment. Her youngest child was born in December, 1870; during lactation, seven months later she menstruated, and immediately thereafter developed symptoms of mental derangement. Became jealous of her husband and convinced of his unfaithfulness, morbidly suspicious of relatives and friends; at times noisy, violent and unmanageable: was brought to the hospital a few days after commencement of attack, and in less than a week was quiet and giving no trouble, though her delusions and suspicions remained. She again became excited at next menstrual period, but a few days after its cessation began rapidly to improve, gave up all delusions and fears, became cheerful and sociable, to again relapse when flow returned, though symptoms were much milder in character than before. She continued in this way, seeming entirely well during intervals, and growing less and less nervous, irritable and despondent at periods, until March, 1873, when having experienced little trouble at

last sickness, she was allowed home on trial; continuing to improve, she was discharged in June following.

She remained well for four years, when, on October 25, 1877, she was returned to the hospital with essentially the same symptoms as at former admission. Her case ran the same course as before, except that her periods of comparative sanity were shorter, and she did not improve. The evident close relation existing between the function of ovulation and the mental symptoms led to the opinion, held by Dr. Bryce and concurred in by Drs. J. Marion Sims and Robert Battey, to whom a statement of her case was submitted, that the abolition of this function would probably result in an entire restoration to mental health. In March, 1879, she went to Rome, Ga., accompanied by her husband, where the operation of normal ovariectomy was performed upon her by Dr. Battey himself. She made a good recovery, and was returned to the hospital after convalescence was complete; began slowly to improve, the periodicity of her attacks being broken up, and all mental symptoms gradually subsiding. The ultimate result has not been so favorable as was hoped for, as her normal mental vigor and balance have never entirely returned. She remained in the hospital until September, 1884, when her husband took her home. From his letters we learn that she attends to her household duties, and to strangers gives little evidence of unsoundness of mind, though she is jealous and emotional, and retains traces of her former suspicions and delusions.

CASE II.—P. C., admitted to the hospital March 7, 1876, æt. twenty-three, unmarried. Since childhood had been tormented by intense and almost constant sexual desire. Practiced self-abuse since her sixth year. Menstruation, from the time of first appearance, was

irregular and at times painful. Symptoms of mental alienation appeared about three years before her admission. By slow degress she became irritable, emotional, suspicious of all with whom she was thrown in contact, melancholy and despondent, with numerous unsystematized delusions of persecution. During convalescence from an attack of typhoid fever, she twice attempted suicide, but was not brought to the hospital until five months later. She soon developed into one of the most troublesome and disagreeable patients in the institution. Complained to every one who would listen to her of ill treatment by attendants; gave long and circumstantial accounts of immoral relations existing between the male and female employes, and accused the officers of attempting to violate her person at night. Her mind seemed to dwell upon sexual matters and she masturbated at every opportunity. All these symptoms were intensified at menstrual periods, and in great measure passed away during intervals. She remained in this condition, showing no tendency towards improvement, for six years, when it was decided that removal of her ovaries offered the only hope of cure. Not much was anticipated as to the nymphomania, since the sexual sense is not destroyed by ovariectomy, but it was expected that the monthly exacerbations would be arrested, the mental balance restored, and the abnormal passion held in check thereby. Dr. Battey accepted the invitation to perform the operation, came to the hospital and removed both ovaries on June 26, 1832. No disease or structural change was found in either organ. Patient recovered rapidly without an untoward symptom as to results. She improved greatly during the first year, so much as to be sent home on trial in the summer of 1833. She remained at home one month only, it being noticed that she became more nervous, uneasy and suspicious as

soon as she passed from beneath the restraining hand of asylum routine and discipline. She still suffered from intense sexual desire, but at intervals only, and masturbated rarely. During the past two years she has grown worse, melancholy, hysterical, has many delusions, and at times indulges her old habit of making accusations of immoral conduct against officers and attendants.

ABSTRACTS AND EXTRACTS.

GENERAL PARALYSIS AT THE AGE OF SEVENTEEN.—Dr. E. Régis publishes in *L'Encéphale* for September and October, 1885, the history of a case of general paralysis at the remarkably early age of seventeen, and appends an interesting commentary on the case. In a previous number of the same journal, Dr. Régis recently reported a case occurring in a young man nineteen years of age, when he advanced the opinion that if general paralysis occurred thus exceptionally before the twenty-fifth year, it was no doubt due to a powerful cause, such as heredity, syphilis, alcoholism, traumatism, general or local diathesis, &c., precipitating predisposition and placing the brain prematurely in anatomical conditions that properly belong to mature development.

The patient, an illegitimate son, was born in Bordeaux, November 9, 1864. His father had suffered several years from gouty rheumatism, and had lost his father and a brother from that disease. Patient's mother is a woman of forty, intelligent, in fair health, but very nervous, and subject to uterine hæmorrhages. She is a widow, but has had no children by her husband. Her brother died at the age of twenty-four, of strangulated hernia. They were both illegitimate children, though acknowledged. Their father, who died, at the age of sixty-five, of liver disease, married subsequently to their birth, and had by this wife two children who are alive and healthy. With regard to their mother (maternal grandmother of the patient), she died at the age of fifty-four in a state of profound melancholia, which had lasted four years, and supervened on the marriage of her paramour with another woman. Such is the genealogy of the case, a little complicated perhaps, but of which it must be especially borne in mind that the child is illegitimate, of arthritic stock in the paternal line, and grandson of an insane woman on the mother's side. Patient suffered from no infantile cerebral affection, and only had when a child an attack of small-pox of no gravity.

Put out to nurse from his birth, he was given at the end of three months to a second nurse. The first nurse was pregnant. What affection did he contract by contact with this woman? It is difficult to say positively, but according to all appearances, it was syphilis. At any rate at the end of three months, the physician ordered the nurse to take back the child to his mother. This latter found that he had had boils on various parts of his body, and especially on his legs. The physician called by her said they were soft chancres (?). The eruption was treated and soon cured by applications and baths. No other treatment was adopted.

At the age of ten, patient had a hæmorrhage into both eyes, and this accident occurred several times afterwards. At school he showed intelligence.

Four years ago, he was suddenly taken, without prodrome or accompanying symptom, with ptosis of the right lid which persisted, in variable degree, till his death. From this time he began to fail in intelligence, insensibly at first, then markedly, so that he gradually forgot all that he knew, and becoming quite incapable, was sent home at the end of the year 1881 to his mother by his schoolmaster.

For some months his state was stationary, but his mother having put him under hydrotherapeutic treatment, he became greatly disturbed, was sleepless, incessantly restless, and manifested a tendency to anger, violence and especially onanism. Finally, the embarrassment of speech, up to that time hardly perceptible, became from row on apparent to all.

The intellectual enfeeblement and the signs of paresis increased slowly but progressively, hastened perhaps by the practice of masturbation, which had become very frequent. In the month of July, 1883, the patient lost himself in the streets, and was found after a lapse of three days in the neighborhood of Blanquefort. He was now seen by Dr. Moreau, by whose advice he was placed in an asylum, August 4, 1883.

On admission the patient presented the symptoms of general paralysis in a well-marked form. He was demented, and had no delusions properly so-called. There were noticed a marked intellectual failure, particularly of memory, to the degree of forgetting his age and the names of those whom he knew most intimately; an absolute lack of appreciation of his condition, and perfect indifference to his environment. Physically there were: considerable embarrassment of speech—characteristic ataxo-paretic embarrassment accompanying the utterance of every word—veritable jerkings of the lips and facial muscles. The tongue presented a like tremulousness, and was projected in a jerking manner in the midst of a general trembling of all the neighboring organs. The pupils were sluggish, unequal, the right being much more dilated than the left. The upper right eyelid half covered the ball, which was red and secreted considerable muco-purulent material. The hands were tremulous and clumsy; the legs were weak and awkward, and gave to his gait a stamp of uncertainty. Writing had become almost impossible and the characters were formless. Finally, the patient had been filthy from time to time, and the indications favored a speedy supervention of complete relaxation of the sphincters. His habits of onanism persisted, and were indulged in a sort of automatic unconscious fashion.

Such was the clinical picture presented on admission, and from which it is impossible not to recognize a general paralysis already far advanced. A few days after admission, Professor Ball saw the case, and was struck with its rarity. Dr. Régis, suspecting cerebral syphilis, especially in view of the unilateral ptosis, instituted a thorough mixed treatment, that is to say, inunctions every second day over a quarter of the surface of the body with a mercurial ointment, and a daily potion of four to six grammes of iodide of potassium.

This treatment was but badly borne by the patient, and the inunctions especially were not long in exciting mercurial salivation without the least accompanying improvement in his condition. On the contrary, he became continuously filthy, and in every way worse, so that on October 13, two months after admission, his mother took him home. Recourse was had to a derivative and revulsive treatment, consisting of mild purgatives frequently

repeated, and the application of a permanent blister to the nuchæ, after which a seton was introduced at the same point. Phosphate of lime was given internally. From this time, probably under the influence of the medication, the patient improved slightly in so far that his symptoms of failure diminished in itself, walking became possible, and he ceased to be filthy. The remission lasted but a few months however; soon the disease resumed its course, and went on to the stage of terminal cachexia. This period of cachexia, apart from the usual symptoms and especially a few congestive shocks of an apoplectiform type which occurred from time to time, presented certain uncommon phenomena, which it seems proper to mention. Thus towards the end of the patient's life, there supervened epistaxis more and more frequent and more and more abundant, accompanied by the hæmorrhages into the right eye, which occurred from time to time from his childhood. And even when the patient had become bed-ridden, certain exposed portions of his body, such as his elbows, the nuchæ and the dorsal region, presented not the usual sloughs of general paralysis, but actual ecchymotic pockets, which on opening discharged a certain quantity of sanguinolent fluid. Dr. Moreau further observed, during this final period, great headache accompanied by almost incessant cries, especially at night.

The patient died of marasmus in December, 1884, that is to say, about four years after the onset of the disease. It is to be regretted that an autopsy was unobtainable.

Remarks.—Several questions are raised by this case. In the first place I will mention the least important in order to give greater attention to the age of the patient, which seems to me to take precedence over all others. I would first call attention to the existence of numerous arthritic ancestors, adding that I have already had frequent occasion to observe this peculiarity, which seems to indicate, in conformity with the views of Bazin, a certain analogy between the arthritic diathesis and cerebral disease. In the second place, I would note the eye symptoms, and particularly the ptosis, which occurred before any other symptom. I have several times observed this accident in syphilitic patients for a longer or shorter period before the invasion of the symptoms of meningo-encephalitis, sometimes six months, sometimes several years previously. Our eye specialists must frequently have had occasion to observe this fact, which seems to establish a relation between specific and paralytic accidents, and which may put us on our guard in any case against the subsequent evolution of general paralysis in syphilitic patients.

In this connection I would also call attention to the inefficiency of the specific treatment in our patient. It may be objected that it is not absolutely averred that the subject was syphilitic. Very true, but many a time I have observed this negative result in the treatment of general paralytics who were manifestly syphilitic,

and I am convinced that many of my colleagues have had a like experience. Now this absolute inefficacy of treatment in these cases is to be contrasted with its as it were miraculous efficacy in certain others, to all appearances similar, and in which one sees the gravest symptoms improve or disappear, as if by magic, at the end of a few days. Whence this radical difference in the effect of treatment in conditions apparently identical?

Are there really cases more amenable than others to therapeutic action, or must it be admitted that in cases where medication remains absolutely without effect, syphilis has nothing to do with the development of the disease, and that it is not a question of a general paralysis or of a pseudo-general paralysis of syphilitic origin, but, what is very different, of a true general paralysis supervening in a syphilitic patient without the intervention of the specific diathesis. Both hypotheses are plausible, but the question can not but be difficult of decision. This question of the relation of general paralysis to syphilis is at the present day one of the most obscure and most controverted in cerebral pathology. It would seem necessary to concede with Professor Fournier two quite distinct orders of facts. 1. True general paralyses, classic, which have supervened in syphilitic patients, more or less completely outside diathetic influence, and which develop in a normal manner without being in the least improved by anti-syphilitic treatment. 2. Syphilitic pseudo-general paralyses, that is to say, cerebral conditions offering all the characters of general paralysis, but susceptible of improvement, and even of more or less rapid recovery under the influence of the same treatment.

To return to our patient, I would recall certain uncommon phenomena in general paralysis, which in his case marked the termination, and especially the violent headaches, likewise the spontaneous hæmorrhages into the eye, nasal mucous membrane, and subcutaneous cellular tissue. With reference to these last symptoms, I, for my part, have never observed them, and I only find mention made of something similar in a case reported by Dr. Christian, which presented simultaneously a hæmatoma auris and purpura hæmorrhagica. Dr. Savage also cites, in a recent pamphlet, cases of abundant hæmorrhage into the subcutaneous cellular tissue, developed as the result of slight traumatisms in general paralytics, and comparing these facts with the tendency to hæmatoma observed in these cases, he concludes that there exists a dyscrasia of the blood and a friability of the small vessels in

general paralysis. By a like mechanism perhaps the hæmorrhagic phenomena observed in our patient were produced.

With regard to the age of the patient, it is needless to remark how exceptional it is to observe a case of general paralysis at the age of seventeen, a disease so intimately associated with adult life, and which appears so to speak, to be inseparable therefrom. The rarity of premature general paralysis seems to become less and less exceptional, and numerous cases have been recorded as occurring under twenty-five, and even, as in this case, under twenty. Several foreign journals, among others the *Journal of Mental Science* and the *Alienist and Neurologist* have recently published examples, while but a few years ago there was not a single case on record, and the best authors, such as Bayle, Calmeil, Marci, Luys, affirmed that they had never seen a case before the age of twenty five. The fact that early cases of general paralysis are becoming less rare would certainly have no important significance in itself, did it not appear to be intimately associated with two other facts of the same order, to wit, the progressive lowering of the average age at which general paralysis occurs, and the ever increasing frequency of this affection. The lowering of the average age is undeniable. It is only necessary to consult earlier authors to see that the majority of their cases occurred in patients aged forty, fifty years and more, while to-day the published cases show them to be younger. Moreover the average age fixed at forty-five and even fifty in the time of Bayle and Calmeil has since become sensibly lower till, for my part, I have found it to be thirty-eight in 317 general paralytics under observation at St. Anne. This is also Dr. Julius Mickle's experience. In some asylums a third of all the male patients are general paretics.

From these data I think we must conclude that all degenerative affections of the nervous system, of which it constitutes, so to speak, the type, seem to spread from day to day, at least in man, to resolve themselves more and more into morbid entities, to acquire an ever increasing importance, in a word, tend to invade little by little the pathology of the nervous system and to predominate over insanity properly so-called—madness.

It is a singular fact that simple madness has existed from all time, at all periods, as well in the most barbarous countries and in the most primitive states of society as among most civilized peoples, and that, contrarily to the general belief, it does not undergo in any well-defined manner the fluctuations of civilization,

any more than the influence of revolutions and social disturbances. On the contrary the affections of the nervous system called degenerative, general paralysis, scleroses, *ramollissements*, entirely unknown at first, seem only to become really frequent in states of society where civilization has attained its maximum, and has carried intellectual development to the highest point. From this time these affections seem to increase in direct ratio to the advance, already excessive, of civilization, while simple madness remains, as it were, indefinitely stationary. That is, indeed, a danger to be noted and well worthy the attention of all.

Certainly I would not push my deductions too far nor show myself as pessimistic as the English author Mickle who, after having noted this lowering of the average age of general paralytics, adds that "this impression, if correct, would speak ill for the vitality of the peoples of the West of Europe, as far at least as the disease may be deemed analogous to a prodigal wasting of vital power, and premature senility; the early attainment of old age in the individual members of a race being the forerunner and prophet of its imminent decay." It is impossible, however, for me not to insist that these facts have their significance.

Having pointed out the danger, it would be proper to suggest the remedy, but one can easily understand how difficult, not to say impossible, it would be to formulate precise indications destined to stem the pathological current or to avert it. That would involve a complete study of social psychology and hygiene, and I, for my part, confine myself to singling it out here, among the neurological questions of the day, as the one that most merits attention.

DOUBLE-BARRELLED MADNESS.—The rash experiment of putting firearms in the hands of lunatics, upon which we commented some time ago, has, we are informed, already been attended by a sad fatality. The authorities of the Crichton Royal Institution, Dumfries, having come to the astounding conclusion that shooting parties would form a suitable feature in the treatment of the better-class insane, now rent Kirkmichael House and shootings, some eight miles distant, and send thither relays of patients for change and recreation, shooting and fishing being amongst the attractions advertised. About the middle of last month, as we are informed from most reliable sources, a young gentleman, aged about twenty-one, who had arrived only some

four or five days previously for treatment, joined one of the shooting parties. It is said that he strayed away from his companions in a wood; a report was heard, and he was found lying shot in the head, and a few hours afterwards expired. No public investigation appears to have been held, or any account of the sad occurrence to have been published in the local papers. The police authorities, however, are stated to have investigated the matter, and to have come to the conclusion that the unfortunate occurrence was the result of an accident, and was not a case of suicide. Doubtless the Procurator Fiscal was fully satisfied on the matter, and no individual was to blame for a not uncommon accident—loss of life by the accidental discharge of a gun. But seeing that it is a system—and, as we have no hesitation in saying a most dangerous and ill-advised system—that is on its trial, surely the utmost publicity should be given to such a case. We have always advocated that lunatics should be allowed the greatest possible amount of freedom that is consistent with their own safety and that of others. But the insane, even the most chronic and apparently harmless cases, are but seldom to be entirely trusted, and the idea of putting in their hands such a deadly toy as a gun would be worthy only of their own distorted imaginations. We cannot help thinking that if such a case had occurred in England, it would have been left to us to bring the fierce light of public opinion to bear about this matter. What have the Scotch Lunacy Commissioners to say? Can they not condemn and check a sport which thus, misused, has untold (though only too soon likely to be realized) perils? If not, we may soon expect to hear of parties of lunatics being sent as a recreation to gather samphire, of their being usefully employed in the manufacture of dynamite, or specially engaged in the dispensing of poisonous drugs! The matter is a most serious one, and attention should be drawn to it in the new Parliament.—*The Lancet*, December 12, 1885.

APHASIA FROM MENTAL BLINDNESS.—Of the forms of aphasia taken in its widest sense two may be said to fall under the head of incapacity of transmission, and two under the head of incapacity of reception. The first two are motor, viz., the incapacities of putting into sounds the words which can be imagined, or of putting into written shape the word which can be spoken (agraphia); the second two are sensory, viz., the

incapacity of getting any idea of a word from either ear or eye, from sound or sight, mental deafness and mental blindness to words. Ribot has helped to show that there is not a memory for words *per se*, but a memory which is with some people visual and with others auditory; some in remembering a word recall its written or printed look, and some its spoken sound. Prof. Bernheim gives in detail the account of a case of partial aphasia lasting over a long time, in which there was another and more special element, viz., no physical blindness but a mental incapacity to recognise from sight, at any rate, what things were (*cécité psychique des choses*.) It was in a man aged sixty-three, of healthy antecedents. In May, 1883, he had some hidden cerebral symptoms followed very soon by incomplete left hemiplegia (with slight primary contraction passing off in a few days), left hemianæsthesia and hemianalgesia and left lateral hemianopia of both eyes. During the next two years, up to the time of the report, slight loss of power on the left side continued, with the hemianopia as before, and occasional attacks of Jacksonian epilepsy intervened. A few months before the onset of his cerebral symptoms a small tumour had been removed from his eyelid, and it seemed at first probable that his brain injury was due to a similar tumour in it; but the almost completely stationary character of his state during the next two years rendered this ultimately very unlikely. That the internal capsule must have escaped serious injury was to be gathered from the rapidity with which he recovered from the hemianæsthesia and the slight early contraction and exaggeration of reflexes. He was a left-handed man in all actions except writing, which he had been obliged to learn with his right hand, and which he could still execute after his brain symptoms were developed. But he could not read what he wrote, nor any print, nor could he recognise more than one or two out of many drawings of simple objects. He could add and multiply, and recite the days of the week and the months of the year, and keep up a conversation which was in most points natural enough, but when he was shown simple objects it became obvious that he did not recognise them; a glass, he said, was a bar, a loaf was a saltcellar, a book was a crust for a pie, a crucifix was a catechism, and so on; a knife he would recognise one week and the next he would say it was a key to make soap. And that this was due to want of recognition, not merely the result of inability to use the right names, he would show by his actions. He was asked what a bunch of keys was, and he said at once that it was

used to make marks with, and he took a key and made motions with it as if it had been a pen; then he saw or felt that that was not its right purpose and was puzzled and tried to sow corn with it as he said he had done thousands of times before, but was again dissatisfied. Bernheim made the motion of opening a lock, but he gained no information from that; then he asked him, "What do you use to unlock a door?" and at last he caught the auditory suggestion and said, "A key, of course; this is a key." Bernheim conceives a centre of visual memory in the inferior parietal lobule, and a centre of auditory memory in the first temporo-sphenoidal convolution, interconnected by at least two paths, and connected each more intimately with a centre of simple vision and a centre of simple hearing (*audition brute*.) In the patient under discussion it is to be imagined that the normally intimate connexion of the visual memory with the centre of simple vision was nearly gone, and that the visual memory could as a rule only be reached after considerable difficulty by a path which was unusual in this particular subject, viz., through the hearing and the auditory memory. The verbal amnesia arose, in fact, from a mental incapacity to recognise things in general by sight, and this suggests that probably there are also cases in which there is a similar incapacity to recognise things in general by hearing, which leads to a similar verbal amnesia.—(*Revue de Médecine*, August, 1885, and *Practitioner*, December, 1885.)

THE STANDARD OF SANITY.—In an article on this subject in the *British Medical Journal*, November 28, 1885, Dr. William R. Huggard, viewing insanity as a legal or social, rather than a medical term, defines it as "any mental defect that renders a person unable (and not capable of being made able by punishment) to conform to the requirements of society." The popular view that insanity is something definite and absolute must, he thinks, be looked on as a fallacy of suppressed correlative; in other words, insanity is not something fixed and definite, but relative to the requirements of society—the standard of sanity in the class to which the person belongs. Thus, a Fijian regards murder as a claim to glory, thieving is a virtue amongst the Patagonians and Comanches, and chastity would be considered a vice by the Creeks, the Chinooks, and the Andamans. Therefore, even if, in these peoples there were disease, Dr. Huggard is of opinion that the question of insanity could not arise in regard to a

matter considered by their state of society to be one of indifference, and suggests the absurdity of talking of homicidal mania, of nymphomania, and of kleptomania, as forms of insanity, where murder, promiscuous intercourse, and stealing are not condemned. He does not concede, on the other hand, that insanity is always due to disease. That there must be some defect of organisation he admits, but thinks that in many cases such defect is of the nature of a congenital lack of balance between structures themselves healthy; and that many cases of insanity might properly be regarded as a kind of "throw-back" to a type of organization now common only among the lower races of mankind.

With regard to the standard of insanity in England, opinions differ. There are those who think that any one who, by reason of mental defect, is a detriment to the public welfare, should be under efficient supervision and control, though not necessarily in an asylum. Others hold that only homicidal or suicidal lunatics should be confined, and the emphatic assertion has recently been made by an English lawyer that no one should be put in an asylum unless he would commit murder if at large.

To the question, What would happen if asylums were cleared of all but dangerous lunatics—lunatics likely to do violence against themselves or against others? Dr. Huggard answers: "The damage to society from the insanity so turned loose would be threefold: First, the damage to individual members of society directly, in squandered property, in libelled character, and in ruined peace; secondly, the detriment to the patient himself in lessened comfort from less suitable surroundings, in diminished chance of recovery, in pecuniary ruin, or in premature death; thirdly, and lastly, the damage inflicted on society generally by the lowering of the standard of sanity.

Dr. Huggard is of opinion that most lunatics (including idiots and imbeciles) would find themselves in a much less congenial atmosphere outside the asylum walls than within. "Asylum-life is an artificially made world or society, especially contrived to avoid the disagreeable jars that madness would entail upon those who should display it in the outer world."

The indirect effects of clearing out from asylums all patients not directly dangerous, would, he points out, be more widespread and more disastrous. "In addition to the beggary and premature death of persons unable to take care of themselves, and the unhappiness, disquietude, and ruin, inflicted on others, we should

have indirectly, murders, suicides, drunkenness, and other crimes, arising on the one hand from the feeble self-control, and on the other hand, from the greater friction. Moreover, the insane are frequently so obscured in thought and in act, that if at large, they would inevitably render themselves amenable to the penal laws. But punishment will not hold madness in check; and the sane would be goaded by the madness they suffered from their neighbors to take the law into their own hands. Private revenge would take the place of public justice. The national character would undergo a degradation wider and deeper than a superficial view would lead one to suppose; and we should have a return of the social disorder that characterised this country in by-gone centuries."

The governing principles in determining the standard of insanity is the protection of the public and the protection of the insane. And by the protection of the public is meant by Dr. Huggard, not merely protection from bodily violence, but the protection of all that makes life worth living; the protection of the insane meaning that only such restrictions shall be imposed upon them as may be necessary for their own good, or for the public safety.

Dr. Huggard's views are summarized thus: "Sanity is commonly judged by an erroneous standard, the standard of mental health; whereas it ought to be judged by the standard of social capability. On the one hand, many persons not in good mental health are far from being insane; and, on the other hand, there are many persons who are normally so much below the average in mental function, that they can not be regarded either as able to take care of themselves in a country like this, or as devoid of danger to the public."

SYPHILIS AND GENERAL PARESIS.—Dr. Wm. B. Goldsmith says (Boston Med. and Surg. Journ., Nov. 5, '85) that among 126 male and 28 female general paretics treated at the Danvers Lunatic Hospital since his superintendency, 36 men and 11 women were known to have had syphilis, or nearly one-third of the whole number. Thirty-two of these 151 cases were Irish, which shows that their comparative immunity from the disease does not perish in this country, though their proportion to the whole number of paretics is somewhat smaller than it is in the entire hospital population. Dr. Goldsmith thinks that these statistics unquestionably show very much less syphilis than actually existed, as

the physician often fails to obtain any accurate history in this particular from patients of the class which constitute the greater part of the population at Danvers, and he was careful to include only those in whom the evidence of this disease was fairly convincing. In five hundred other patients taken consecutively from the same record books, paretics being excluded, syphilis was found to be more than six times less frequent.

PARALDEHYDE SUPPOSITORIES have been employed as a hypnotic in several insane asylums, according to Dr. A. Sauter (*Der Fortschritt*, August 5, 1885,) with the most satisfactory results. Each suppository should contain one gramme (15 grains) of paraldehyde, and they may be made by allowing the paraldehyde to solidify in a glass bottle in a water bath, with twenty per cent. of paraffine, and this gelatinous mixture introduced into the suppositories.—*Therapeutic Gazette*, Oct. 15, 1885.

COCAINE IN THE MORPHINE HABIT.—Smidt and Rank, physicians of a prominent German Morphine Institute, confirm the value of cocaine in the cure of the morphine habit (*Berl. Clin. Woch.*, Sept. 14, 1885). Their testimony and conclusions are formulated as follows:

1. Cocaine is a highly useful and almost indispensable factor in the cure of the morphine habit. It facilitates and shortens the latter materially, without exerting any untoward secondary influence upon the patient.

2. The principle of cure consists in exhibiting morphine in decreasing and cocaine in increasing doses.

3. Cocaine acts best when exhibited subcutaneously in a five per cent. watery solution.

4. The ordinary dose is $\frac{1}{2}$ gr. and may be increased to $1\frac{3}{4}$ gr. though 3 grs. ought not to be exceeded.

5. A cocaine habit has never been noted to occur.—*Ibid.* Nov. 16, 1885.

CANNABIS INDICA AS A NARCOTIC.—Dr. H. Lewis Jones (*The Practitioner*, Oct., 1885), praises this drug as a sleep-producer,

especially when sleeplessness is accompanied by delirium. He thinks it important to give it in sufficiently large doses. Two to three grains of the extract can be taken in the form of pill every four or every six hours: frequently the first dose is sufficient. He prescribes it as routine treatment in all cases of delirium tremens coming under his care, whether simple or complicating injury or disease. In a typhoid fever case with much sleeplessness, in an excitable young woman, there was complaint of hallucinations. It caused her to see visions of beautiful gardens and the like. Dr. Lewis has heard of one case where two grains of the extract were said to have made a woman "temporarily quite mad." In his own case doses of the extract up to four grains produce a mild narcotic effect, the only abnormal sensations noticed being numbness of the extremities and slight mental confusion.

HEART DISEASE AND INSANITY.—The following summary and conclusions (*Journal of Mental Science*, October, 1885), are from a prize essay by Dr. T. Duncan Greenlees, of the Cumberland and Westmoreland Asylum, Garlands, Carlisle, an analysis of which is given elsewhere in this JOURNAL.

1. Heart disease occurs with greater frequency among the insane than among the sane.

2. Increase in frequency is in part regulated by the frequency of heart disease among the sane population in the vicinity of the asylum where the observations are made.

3. Heart disease is more frequent among the insane in the counties where the ratio of the insane to the sane is the greatest.

4. The distribution of heart disease among the sane is regulated by the geographical position, dietetic and other influences acting as predisposing causes. Similar conditions appear to exercise an influence over the frequency of heart disease in the insane.

5. The numerical difference between heart disease in the sane and the insane, if considered over all, is not great, being 8.72 per cent of the total deaths in the former, and 9.36 per cent on the latter.

6. Heart disease is present in 2.94 per cent of the living insane, and is the cause of death in 13.51 per cent. Both on admission and at death the age of the greatest number who had heart disease was between sixty and seventy.

7. The clinical symptoms of mitral regurgitation in the living

insane, and mitral disease with left-sided hypertrophy post-mortem, are the most common affections.

8. The hearts of the insane are heavier than those of the sane, and this condition is more especially noted in general paralysis, where the heart is very frequently hypertrophied.

9. In many cases of insanity the general circulation is sluggish, and the extremities are cold, livid, or even swollen. This condition occurs most frequently in cases of chronic or advanced types of insanity.

10. The arteries are frequently affected in the insane, but, with respect to the age, atheromatous degeneration of the arterial coats does not appear to occur earlier than among the sane. In general paralysis, however, thickening of the arterial tunics, or even atheromatous degeneration of the cerebral arteries, occurs quite indifferently of the age of the patient, and appears to be influenced more by the duration of the disease than by the age.

11. Among the sane, heart disease appears to exercise an important influence on the mind, changing the temperament and altering the character of the patient, and this change may become so prominent that the psychical phenomena exhibited may be those actually of insanity.

12. Not only does heart disease alter the type and delusions of insanity, but also some cases occur among the insane, in whom the only ascertained predisposing cause of the mental aberration is the diseased condition of the heart, or general derangement of the circulatory system, and that, in these cases, the cardiac lesion is, no doubt, the predisposing cause of the insanity.

BIBLIOGRAPHICAL.

REVIEW OF ASYLUM REPORTS FOR 1884-85.

Biennial Report of the Alabama Insane Hospital at Tuscaloosa, for the years ending 30th September, 1884. P. BRYCE, M. D.; LL. D., Superintendent.

At date of last biennial report there remained in the hospital 417 patients. Admitted since, 455. Discharged recovered, 127; improved, 26; unimproved, 15; died, 74. Remaining September 30th, 1884, 630.

The past biennial period was a remarkably prosperous one for the asylum, showing as it does an increase of 213 in the number of patients under treatment. The demand for space followed the supply of the two new sections for which an appropriation of \$100,000 was made by the Legislature in 1881. The building for men was completed and opened July 1, 1883, and that for women April 1, 1884. The asylum can now comfortably accommodate 750 patients, and it is expected that with the present enlargement of the building all demands for the admission of white patients will be satisfactorily met for many years to come. Further accommodation is necessary, however, for the colored insane. For several years the two detached one-story buildings set apart for their use have been crowded. They accommodate each between forty and fifty patients only, and one need but reflect that this is the only hospital for the insane in the State of Alabama, to appreciate the immediate necessity for provision for a much larger number. Until such provision is made possible by State appropriation, very many colored insane must be confined in county jails pending the occurrence of vacancies, or, what is worse, be allowed to wander at

large. We believe it to be the experience of Alabama alienists that insanity is on the increase among the colored population of the State, and that the recovery rate among them is low. It would seem therefore to be a humane measure to reclaim as many as possible by prompt and proper treatment, and the State of Alabama, so generous heretofore in her charities, will surely not turn a deaf ear to the pressing claims of this class.

Dr. Bryce is to be congratulated on the admirable management and discipline of his institution. Employment plays, as it should, an important part in the treatment, and one sees but few unoccupied patients in the wards. A novel feature—available however only in southern asylums—is the use of carding and spinning to occupy, in simple mechanical work, women of small mental vigor. Knitting-bees are also held in the wards of evenings, and industry is occasionally rewarded in a special way by the giving of small tea parties, at which the matron presides. The asylum is fortunately situated in a rich coal region and has its own coal pit. Thus gas can be profitably made on the premises, and a clayey soil makes easy the manufacture of machine-made bricks. A large reservoir has recently been built, and by new arrangements an abundant stream of water could be delivered on any portion of the building in case of fire.

For three consecutive terms, the Board of Trustees has continued Dr. Bryce in the position of Superintendent, thus recognizing praiseworthy work done in behalf of the insane of Alabama for a period of twenty-four years.

Report of the State Lunatic Asylum, Austin, Texas, for the year ending October 31, 1885. Dr. A. N. DENTON, Superintendent.

There were in the asylum at date of last report, 555 patients. Admitted since, 208. Discharged recovered,

107; improved, 16: unimproved, 11; not insane, 2; furloughed, 3; escaped 6; died, 63. Remaining Oct. 31, 1885, 555.

The Superintendent justly complains of the overcrowded condition of the asylum—an overcrowding which the completion of the new hospital at Terrell has failed to relieve. The increase of admissions is attributable, Dr. Denton thinks, to an effort on the part of the county officials to relieve themselves of the care of the chronic insane, who have been accumulating for years past. This official zeal is, to our certain knowledge, not universal in the State. Not many weeks ago the writer was in San Antonio, Texas, and there found that a lamentable state of affairs obtained in the almshouse of that city. A strong young German, an acute and apparently curable case, was left pretty much to the mercy of inexperienced attendants, and cared for (?) in the most primitive manner. A dement wallowed in filth in a neighboring and furnitureless room, and he learned that but a short time previously there had been confined in a similarly bare apartment, next to the mule-stable, an unfortunate woman who might, had she elected, have clambered over the too short partition that was designed to prevent access to the better housed animals in the stable. The hands of the visiting physician were tied, the policy of the poor authorities of San Antonio being apparently to shorten life by privations and relieve the city of a pecuniary burden that is unwillingly borne. And even where the best intentions prevail, delay occurs in placing patients under proper treatment, from the fact that a jury must be empanelled to try every case of alleged lunacy before commitment to an asylum.

Dr. Denton thinks that insanity is increasing in greater ratio than the increase of population. This

increase he attributes to the shipment to Texas of persons who, if not actually insane, are so enfeebled by privation and want for successive generations, that their weak physical and nervous organizations become deranged from very slight exciting causes.

The propriety of building an addition to the asylum for the colored insane is dwelt upon. It is to be hoped that the State will vote an appropriation for this purpose. The writer was painfully impressed, during a recent visit to Austin Asylum, by the totally inadequate provision for the colored women especially, and the necessity for a new building for them can not for a moment be questioned.

The superintendent reports a fire as having occurred on October 30th. Flames were discovered issuing from the roof of the stables about 1.30 A. M. Adequate means for extinguishing the fire were not at hand, and the building with most of the farm property therein contained, was consumed. The damage is estimated at \$3,270. A farm with farm stock has been added to the hospital during the year.

An epidemic of dengue invaded the asylum in October, and about one-half of the patients and nearly all the employés were stricken down with the disease. Though dengue is rarely fatal in the absence of complications, a considerable number of broken down, bed-ridden patients were unable to withstand the shock and died. Dr. Denton's optimism finds expression, in this connection, in the reflection that inasmuch as "to this class of unfortunates life is only a grievous burden, there is scarcely room for regret."

Report of the Western Lunatic Asylum of Virginia, for the biennial term ending September 30, 1885. Dr. A. M. FAUNTLEROY, Superintendent.

At the date of last report, October 1, 1883, there were in the Asylum 539 patients. Admitted since, 297. Discharged recovered, 128; improved, 14; unimproved, 5; not insane, 1. Died, 78. Remaining September 30, 1885, 610 patients.

On April 15, 1884, Dr. Fauntleroy was re-instated in the office of superintendent. The biennial term began under another régime on October 1, 1883, and so continued until Dr. Fauntleroy's re-accession to office. Opportunity is thus afforded the superintendent of contrasting the record of the two periods of the year anterior and ulterior to April 15, 1884. It appears that the admissions were very nearly equal in number, though the duration of the first period exceeded that of the second by a month and a half. The maximum number in the household during the second exceeded that of the first by a month and a half. The daily average of the second period also exceeded by fourteen that of the first. The discharges by recoveries, deaths and removals, aggregated for the two periods respectively 41 and 62, affording respectively a ratio of recoveries to admissions of 26.47 per cent, and 56.92 per cent. The percentage for the latter period more than doubles that for the previous six and a half months of the year. The superintendent gives these figures, "not as a boast, but for the information of the numerous friends and patrons of the asylum throughout the State, affording, as they do, gratifying evidence of the asylum's steady advancement in usefulness and prosperity."

Our limited space precludes more than the mere statement that many improvements, structural and

other, have been made during the biennial term, but we may be permitted to assure Dr. Fauntleroy of our sympathy in his work and of our appreciation of the value of his services to the State of Virginia.

Sixty-Second Annual Report of the South Carolina Lunatic Asylum for the year ending October 31st, 1885. Dr. P. E. GRIFFIN, Superintendent.

The number of patients in the Asylum on October 31, 1884, was 628. Admitted since, 216. Discharged recovered, 69; improved, 22; removed, [unimproved?] 70; escaped, 3; on trial, 15. Died, 75. Remaining October 31st, 1885, 605.

The admissions were seventy-seven less than last year. This, to a large extent, is the result of the Act of the last General Assembly, which requires more careful examination before commitment. Seventy patients were removed by County Commissioners. These were quiet, harmless, chronic patients, and six of them were returned under new commitments. The superintendent refers to the trouble he experiences in carrying out this provision of the law. "In many cases it seems wrong to send them to a poor-house, which is considered a disgrace, and their accumulation in the asylum becomes a serious expense to the State." He suggests as a better plan that the counties pay a moderate sum for the support of such patients in the State Asylum where their industry can often be made to diminish the general expense.

The centre building of the asylum was finished and occupied in August. The event is important inasmuch as it may be considered as the completion of the new asylum, which was begun as long ago as 1857.

Thirtieth Annual Report of the Northampton Lunatic Hospital for the year ending September 30, 1885. PLINY EARLE, A. M., M. D., Superintendent.

Patients in the hospital at date of last report, October 1, 1884, 463. Admitted within the year, 136. Whole number of *cases* within the year, 599. Discharged recovered, 29; unimproved, 26; not insane, 3; died, 27. Remaining September 30, 1885, 476. Number of different *persons* within the year, 588. *Persons* admitted, 130; recovered, 29. Daily average number of patients, 475.94.

The present report is an unusually ample document and gains additional interest from the fact that it conveys to the trustees of the hospital Dr. Earle's last official message as Superintendent. We refer elsewhere to Dr. Earle's retirement from office after a service of twenty-one years, and one could not have more convincing proof of the fulness and faithfulness that have characterized that period than this last report, furnishing as it does a retrospect of the workings of the institution during his superintendency.

Dr. Earle is nothing if not a statistician, and as might be expected, he embraces this final opportunity to reiterate *con amore* his well-known opinions regarding the desirability of distinguishing between *persons* and *patients*. To the reader not gifted with unusual arithmetical acumen the presentment of his case is almost bewildering. But when one reads of a man who has been admitted twelve times, discharged recovered four times, much improved once, and improved six times; and of a woman who has been admitted sixteen times, discharged recovered eleven times, much improved once, and improved three times, one can not fail to appreciate the merits of the cause of which Dr. Earle has so long been the untiring champion.

His new statistical tables have already, he says, had an important effect in one respect. "Since their adoption there have been very few instances in which the same person has been discharged recovered more than once in the course of the year covered by any one report, and so long as they continue in use there is little probability that any person will be credited with seven recoveries in a year—a distinction which had been accorded to at least one person in the antecedent history of one of the hospitals."

Among the recoveries special mention is made of the case of a woman who was originally admitted at the Worcester Hospital in March, 1871, and transferred to Northampton, in May, 1872. She was regarded for several years as the most dangerous patient in the female department. Her periods of maniacal excitement at length began to diminish in frequency and intensity, and a gradual improvement occurred from year to year until finally, after a hospital life of more than fourteen years, she appeared to be well and went home to her friends.

In speaking of deaths, Dr. Earle calls attention to the greater mortality in the male sex. In no less than fifteen of the last eighteen years, both the actual and the proportionate number of deaths of men exceeded those of women. The ratio last year was 5.51 per cent. for the men, and 3.68 per cent. for the women. Most alienists hold with Dr. Earle that shattered constitutions and profound diseases of the brain are much the most frequent in the naturally stronger sex.

Dr. Earle's paper on "The Curability of Insanity,"* is embodied in his report. It will be remembered that the conclusions drawn from this statistical study were that the old claim of curability in a very large majority of

* See JOURNAL OF INSANITY, October, 1885.

recent cases is not sustained; and that the percentage of reported recoveries of all cases received at the hospitals in this country still continues to diminish.

In severing his official connection with the Northampton Lunatic Hospital, Dr. Earle has every reason to feel satisfied with the success that has attended his management of the great charity. We regret that we shall not be vouchsafed another opportunity to review one of his reports, but we, together with the trustees, may take comfort from the fact that his mantle has fallen upon Dr. Edward B. Nims, who has been connected with the hospital for nearly seventeen years, feeling sure that its affairs will be administered on the same lines. We are the more confident in this belief in that Dr. Earle will, in compliance with a resolution of the trustees, continue to make his home in the hospital, and give to whilom associates the benefit of his experienced counsels.

Annual Report of the Maryland Hospital for the Insane for the year ending October 31, 1885. Dr. RICHARD GUNDRY, Superintendent.

The number of patients at date of last report was 415. Admitted since, 104; discharged recovered, 40; improved 17; unimproved, 24; died 30. Remaining October 31, 1885, 408.

Dr. Gundry makes the common complaint of overcrowding. Relief was anticipated from the new department for the insane at Bayview Asylum, but only five men have been accommodated there and more can not be received for lack of room. Thus it happens that chronic cases are allowed to remain in the only State hospital for the insane in Maryland, and recent, curable cases often become chronic while waiting to gain admission. The superintendent suggests the propriety

of so adjusting the law of admission of patients to the hospital that every case of uncomplicated insanity of less than one year's duration, shall be entitled to admission, and that when by reason of the institution being full, there is no room for such case, then that a chronic case that has been longest under treatment, from the same county, should be discharged to make room for such recent case. He is of opinion that another institution is urgently needed in Maryland, in the centre of a district of the State remote from Baltimore, say the Eastern shore, to which the patients of that district could be sent. He holds the firm conviction that every insane person is the ward of the State, and that as an active guardian, the State should protect his rights and provide for his wants.

Forty-First Annual Report of the Butler Hospital for the Insane, for the year 1885. Dr. JNO. W. SAWYER, Superintendent.

There were in the Hospital at the date of the last report, 190 patients. Admitted since, 169. Discharged recovered, 46; improved, 39; unimproved, 20. Died, 13. Remaining December 31, 1884, 178 patients.

This report acquires a melancholy interest from the fact of its being Dr. Sawyer's last to the board of trustees. Mention is made, elsewhere in the JOURNAL, of Dr. Sawyer's death and a biographical sketch, written by an intimate friend, fully attests the great loss this institution has sustained in the death of its faithful superintendent.

The asylum year seems to have passed without special incident. Dr. Sawyer calls attention to various requirements, structural and other, to enhance the usefulness of the hospital, and the trustees could not pay a better tribute to their deceased superintendent than by carrying out such of his recommendations as have

not already been acted upon during the year just ended.

Among other desiderata, he mentions detached buildings, capable of accommodating a few patients in each, giving commodious suites of rooms and other conveniences such as can not be had under existing arrangements, and are often desired by the insane and their friends. The possession of such buildings would add, Dr. Sawyer thought, to the efficiency of the institution and promote its financial well-being.

Thirtieth Annual Report of the Government Hospital for the Insane to the Secretary of the Interior for the year ending June 30, 1885. Dr. W. W. GODDING, Superintendent.

There were in the asylum, at date of last report, 1,146 patients. Admitted during the year, 320. Discharged recovered, 88; improved, 49; unimproved, 2; not insane, 1. Died, 105. Remaining, June 30, 1885, 1,221 patients.

Speaking of recoveries, Dr. Godding states that it is probably too much to hope that all of the thirty-six per cent. of cases which were discharged recovered remained well. Indeed, he doubts whether, in a majority of the cases which go out from a hospital apparently recovered, the full mental integrity, the old normal condition of the man as his neighbors have known him, is perfectly re-established. The brain heals—he puts it—but heals with a scar.

New buildings for the patients have relieved the overcrowding, especially in the female department. The hospital now admits of fifty distinct classifications of the inmates. Suitable protection against fire has been made by the provision of iron stairs, fire-doors and fire-walls, but there still remain two wings with but a single stairway each, and it is hoped that Congress will

vote the necessary sum for speedy protection for the two hundred patients who occupy them.

Dr. Godding complains justly of the act of 1882, giving authority, as it does, to the Attorney-General to transfer to the Government Hospital convicts who have become insane while serving sentence under United States laws. Thus many persons belonging to the criminal class have been received for custody and treatment, and the whole number of this class, including military prisoners, under treatment during the fiscal year was forty-three. It is this enforced association of the ordinary insane with crime to which Dr. Godding takes exception, and herein we heartily concur. Aside from the sentimental objection, there are other reasons why the two classes of insane should be kept separate. In the case of the convict, additional safeguards against escape are necessary, and less freedom must therefore be allowed those with whom he is associated. Within the year two convicts under a life sentence were transferred to the Government Hospital from State prisons. We unhesitatingly indorse the proposition that a building should be at once provided, made reasonably secure from the danger of escapes, and having properly inclosed grounds for labor and exercise. Increased accommodation for the colored insane is also necessary.

BOOK REVIEWS.

A System of Practical Medicine by American Authors. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine in the University of Pennsylvania. Philadelphia: Lea Brothers & Co., 1885.

Volume III of Pepper's System of Medicine has been for several weeks before the medical profession, and so well does it sustain the position established by its predecessors, that criticism must necessarily be of favorable tenor. The list of contributors includes the names of many physicians whose reputation for acumen in diagnosis and skill in treatment has not only reached foreign lands, but whose writings have found eager translators.

More than half of this volume is taken up with the discussions of the various affections of the respiratory system, and it is doubtful if there has ever been published in one volume such an elaborate and excellent treatise on this subject. The article by Dr. Carl Seiler on Laryngoscopy and Rhinoscopy, and those by the late Dr. Louis Elsberg on Diseases of the Larynx and Trachea are clear and comprehensive, and beautifully illustrated. The latter, especially, contains plates of pathological conditions that add much to the value of the work.

Under the name of Dr. A. L. Loomis we find an article on Croupous Pneumonia. We are pleased to observe the subject treated in the masterly manner characteristic of the author. A praiseworthy feature of the article is a series of very interesting and instructive temperature charts illustrating the course of the febrile movement in the different stages of the pneumonic process.

The author observes that the experience of American physicians is against the use of the cold bath or the wet pack. "It is found that under it pneumonia is more liable to extend, that the shock of cold to the surface causes a nervous depression, from which the old and feeble do not rally; that although a reduction of temperature may be effected, heart insufficiency is more rapidly reached and is more difficult to overcome."

Dr. Austin Flint contributes two articles, one on Pulmonary Phthisis and the other on Neuroses of the Heart, the former being an elaborate exposition of the subject. The author refers to Virchow's theory that the "sole characteristic of tuberculous disease is the presence of the so-called miliary tubercles" as having at the present time "few supporters in any country."

The latter half of the book is given up to the discussion of the Diseases of the Circulatory System, and includes affections of the Blood, the Spleen, the Lymphatics and the Thyroid Gland.

Dr. Da Costa has an article on Diseases of the Pericardium; Dr. Beverley Robinson has one on Cardiac Thrombosis, and Dr. A. H. Smith discusses the Diseases of the Veins. Dr. Smith has also an exceedingly interesting article on a form of disease which does not appear to have heretofore found a place in standard medical literature. It is called the "Caisson Disease," an affection due to exposure to greatly increased atmospheric pressure, and of which the constant lesion in fatal cases is congestion of the brain or spinal cord. The meninges are also often greatly congested, and if the patient survives for a number of days there will be extensive softening of the cerebral tissues.

Of course it is quite impossible, in the limited space at our command, to mention in detail the subjects treated in so large a volume as this, nor indeed is it

necessary. As the work is already in the hands of the profession it speaks for itself with no uncertain sound.

A Treatise on Nervous Diseases; Their Symptoms and Treatment. By SAMUEL G. WEBBER, M. D., Clinical Instructor in Nervous Diseases, Harvard Medical School; Visiting Physician for Diseases of the Nervous System at the Boston City Hospital. New York: D. Appleton & Co., 1885.

This work is the result of an effort on the part of the author to include "what is most essential for the study of nervous diseases within as small a compass as possible" and we are glad to observe that he has been in a high degree successful. The book contains thirty-six chapters, the first of which is devoted to some general remarks on methods of examination and is followed by a concise account of the anatomy and physiology of the brain.

The Diseases of the Brain, including the various affections of its membranes, Change in Blood Supply, Hemorrhage, Occlusion of Cerebral Arteries, Tumors and Abscess, occupy six chapters. Fourteen chapters are devoted to Diseases of the Cord, five to Diseases of the Peripheral and Sympathetic Nerves, and the remaining ten to a variety of affections not readily susceptible of classification. These include Vertigo, Chorea, Paralysis Agitans, Epilepsy, Hysteria, Neurasthenia, Tetanus, Toxic Neuroses and Syphilis.

As a rule, epitomes of any subject are far from satisfactory and frequently not only impart a superficial knowledge, but, from their brevity convey to the reader erroneous ideas. This book, however, appears unusually free from such objection.

The author has evidently read extensively and has greatly increased the value of his work by placing at the beginning of each chapter a more or less complete

bibliography of recent literature on the subject discussed. The book adds little if anything to previous knowledge, but it brings within reach much that would otherwise remain inaccessible to the general practitioner.

A Contribution to the Study of Diseases of the Circulatory System in the Insane. (The Essay to which the ten guinea prize of the British Medico-Psychological Association was awarded). By T. DUNCAN GREENLEES, M. B., Edin., Assistant Medical Officer to the Cumberland and Westmoreland Asylum, Garlands, Carlisle.

After a brief historical introduction, the author proceeds to treat his subject under two main heads—(1) statistical, and (2) pathological. His statistical division is subdivided into (1) The Condition of the Heart as found among the Living Insane.

Among 672 patients examined, he found heart disease in 86 cases, or almost 137. of the total; and in 294 patients, representing nearly 44 per cent., there was functional disorder present. Among the latter are embraced such conditions as weak and almost inaudible heart sounds, irregular rhythm, re-duplication or accentuation of one or other of the sounds; loud and tumultuous heart action, associated with a false, rapid or abnormally slow, irregular or intermitting, weak or compressible. The author observed that heart disease occurs with greater frequency among recent and acute cases of insanity than among the more chronic and stationary types.

In the cases presenting the clinical symptoms of cardiac disease or arterial atheroma on admission, Dr. Greenlees found (1) mitral systolic murmurs, (2) pre-systolic murmurs, (3) double aortic murmurs, (4) hypertrophy, (5) accentuation or re-duplication, (6) atheroma or thickening of the arteries.

The second subdivision is "The Condition of the General Circulation of the Insane." Here attention is called to the frequent impairment of the circulation, the slow and feeble pulse, and the cold, even livid and swollen extremities, especially in recent cases of acute melancholia and old standing cases of dementia or other chronic forms of insanity. In a population of 530 insane the author found one or other of the above conditions in 59 cases. An inquiry into (3) Heart Disease as a Primary Cause of Death shows that of 222 autopsies made during a period of five years, in 30 cases (1 in 7.4) the heart was diseased to such an extent as to constitute of itself the primary cause of death, and that in 153 cases (68.77) the heart and vessels were not healthy, being sufficiently diseased to constitute a secondary or more remote factor in the fatal issue.

As regards the relative frequency of heart disease in various asylums, the percentage was found to be as follows: English, 5.90 per cent; Scotch, 9.70; Irish, 6.56; while the percentage at Garlands, covering a period of 20 years, was 6.09, making an average percentage of 7.95.

The author's investigations comprise the conclusions of Dr. Burman that heart disease, as a cause of death among the insane, occurs with greater frequency in those localities where the proportion of the insane to the sane is greatest.

Two other subdivisions, an analysis of which is precluded by our limited space, are:

(4) Pathological changes observed in the Heart and Blood Vessels of those Dying Insane, including those changes not necessarily contributing to the fatal issue; and

(5) The percentage of Deaths from Heart Disease or Arterial Change among the General Public.

The author's general summary and conclusions are given elsewhere. (See Abstracts and Extracts.)

In his Pathological Division, Dr. Greenlees gives the result of his microscopic examination of 16 brains, representing cases of dementia, senile decay, epilepsy, general paralysis, paralytic insanity, *folie circulaire*, and congenital imbecility. The chapter opens with a brief statement of the structure of the vessels of the brain in health, in which reference is made to the descriptions of Virchow, Robin, Batty, Tuke, Obersteiner, Deecke, and others. The changes in the insane observed by the author are minutely described and illustrated by two colored plates, and must be read and studied in the original to be appreciated.

The paper is altogether most creditable to its painstaking author, and constitutes an important contribution to the literature of the subject of which it treats. The Cumberland and Westmoreland Asylum may be congratulated on having on its staff two industrious workers in this field of research. Not long since, it will be remembered, Dr. S. R. Macphail, of the same asylum, wrote a valuable Essay on the Blood of the Insane.*

D.

Eighteenth Annual Report of the State Board of Charities, to the Legislature of New York, January, 1885.

This report brings under our view, and enables the reader to form some conception of, the vast system of charitable institutions supported or aided by the State of New York. We have here a tolerably correct inspection not only of the State charitable and reformatory institutions, but of all incorporated and

* See AMERICAN JOURNAL OF INSANITY, April, 1885.

private asylums for the insane, county and town poor-houses, with their departments for insane, alms-houses, institutions for the blind, deaf and dumb, and idiots, Houses of Refuge, Orphan Asylums, Homes for the friendless, the aged, destitute children, foundling hospitals, industrial schools, Houses of Mercy, &c., &c. Of this latter class of general charities, which receive little or no aid from the State, but occasional appropriations from counties or cities, there are no less than 192 in number, with real and personal property amounting to \$18,986,343.41, and a total of receipts from all sources of \$5,538,582.67, and a total expenditure of \$5,114,887.66. The number of persons supported or relieved by these municipal, denominational and private institutions is reported at forty-two thousand seven hundred and seventy-three. Many in the list however have furnished the Board no *data* for their report.

The Board has made a point also of investigating the proportion of foreign and native population supported by the charities of the State. In six city alms-houses, including that of New York city, it finds the number of natives to be 16,575, while the foreign born were 34,300. In the county poor-houses the relative numbers were 8,867 of native, and 9,316 of foreign. Under a State law passed in 1880 (cap. 549), disabled and helpless immigrant paupers may be returned to the countries from which they came. As the General Government in 1882 assumed charge of the "head-money"* of fifty cents each on arriving immigrants, the largest and best proportion of whom settle in other States, the Board has been the more vigilant to secure this State against the burden of pauper immigration by carrying out the State law of 1880. The whole

* The report states that this *per-capita* duty amounted to \$500,000 for the two preceding years.

number of such cases returned to Europe has been 292, at an expense of \$7,003.11. The Board asks for an appropriation of \$5,000 this year to continue this part of their work. It has also urged upon the Department of State at Washington to issue circulars to our representatives in foreign countries giving notice to European governments of our recent legislation on this subject.

The portion of the report with which we are most concerned, is, of course, that which relates to the insane. The statistics seem to be very full and complete. The whole number of insane in the care of the various classes of institutions is 12,123, besides those in private family care, estimated at 3,000. As to the Federal census, that of 1870, showed one insane person to about every 1,000 of the population, but that of 1880, while giving a little over fifty millions of population, showed 91,997 insane, or one to every 545. It is noticed, however, that the insane of native birth were 65,651 or one to 662 of the native population, while those of foreign birth were 26,346, or one to every 254. The Board regards this as only another indication in the same line, that this State especially, through which the principal stream of immigration passes, is more liable to be burdened with the helpless and the unfortunate of the vast multitudes that have poured into this country from Europe.

The four State hospitals for the acute insane at Utica, Poughkeepsie, Buffalo and Middletown, are reported as containing, October 1, 1884, 1,597 patients, the number under treatment during the year having been 2,610. The recoveries were 310; discharged improved, 136; unimproved, 376; not insane, 22; deaths, 169. The proportion of the sexes was nearly equal. The receipts of these four institutions from the State during the year (1884) were \$55,473.64.

The two institutions for the chronic insane, Willard and Binghamton, had under care, October 1, 1884, a total of 2,402 patients, of which Binghamton had 580.

The number admitted during the year was 472, about half to each. Their receipts from the State were \$61,367.50. Willard reports "discharged and died" 172. Binghamton, discharged, 41; died, 47. In all cases we should say, the mortality should be reported separately from "discharges" of any other kind.

The counties exempt from the Willard Act, and which make provision for their own chronic insane, fifteen in number, show a total of 1,370 patients, (590 of them women). Erie had 298, Oneida 247, Onondaga 119 and Queens 121.

In the counties not exempt from the Willard Act, there were 552 insane. Most of these have no provision for insane, separate from the poor-house, but the Board encourages them to make such and to obtain exemption from the Willard Act. The officers of the Board have certainly done good service in visiting these places, and causing the removal of such cases as required it to the State institutions.

In the county asylums of New York, Kings and Monroe counties there was a total of 5,372 patients, of whom 2,256 were women. It goes without saying that these places would be overcrowded, but the Board is sanguine that New York and Kings will soon have large farms and new buildings beyond the purlieus of the city.

The Board in their remarks upon further provision for the insane, seem to fall into the idea that there ought to be no chronic insane in the hospitals for treatment and cure, and that the homes for the incurables should be enlarged *ad libitum*, but they seem to forget

the well-recognized fact that the association of acute and chronic insane is highly beneficial in a large proportion of cases. They do not seem to have noticed the fact that a large number of chronic insane are among the recoveries in the hospitals every year; also that a large number of chronic cases, by prolonged treatment—which includes good food, regular life, association with those improving and occupation—though they do not recover, so improve as to return to their own homes, and not only cease to be a public charge but become useful members of society.

Separation of insane into acute and chronic, as an absolute basis for hospital provision, has no sound foundation in medical science or political economy. If the transfer to county asylums and State institutions for the chronic insane was carried out in the spirit and letter of the law which declares: "When a patient can be certified as harmless and will probably continue so, and not likely to be benefited by further treatment in the asylum" or "is manifestly incurable and can probably be rendered comfortable at the poor-house," we should have more recoveries and more improved cases sent to their families. It can not be doubted that the course taken in the inconsiderate transfer of chronic cases has contributed to the increase of incurable insane as well as the increase of public burdens.

Brain-Rest. By J. LEONARD CORNING, M. D., formerly Resident Assistant Physician to the Hudson River State Hospital for the Insane, Physician to the New York Neurological Infirmary, etc., etc. Second Edition. Revised and Enlarged. G. P. Putnam's Sons, New York and London, 1885.

This small volume is a disquisition on the curative properties of prolonged sleep. The author, having lost faith in the healing powers of "spasmodic migrations

among primitive European hostleries, where, instead of exemption from care, the unhappy victim is assailed by a countless array of petty extortions, which, though insignificant in themselves, serve like the stings of countless hornets, to render both night and day populous with torment," advocates a scheme of treatment which is designed to supplant the go-to-Europe panacea. There are some excellent chapters in the book. In discussing the "Hygienics of Sleep," the author advocates the early-to-bed doctrine, claiming that it is not enough that an individual shall have slept for a given length of time during the twenty-four hours which constitute the two symmetrical periods of vital activity and vital repair. "It is quite as necessary that the requisite period of rest should invariably occur at the time indicated by nature as the best suited for the restoration of spent energy, namely, as soon after sunset as possible." He realizes that the exigencies of modern life are, in a great measure, responsible for the gross violations which are constantly perpetrated against the most important laws of our being, and that modern civilization means far oftener, "the perversion of nature to utilitarian ends than the adaptation of the sociological mechanism to the profound truths of natural law." The whole chapter is a protest against overmental tension, leading, as it must, to interference with rhythmical brain-rest. The intimate relationship which insomnia bears to insanity and functional nervous disorders is animadverted upon, and the conviction expressed—in which we agree—that a large amount of the success to be hoped for in the prevention of insanity will be directly in the ratio of the good results obtainable in the treatment of the premonitory insomnia.

Dr. Corning speaks highly of the Weir Mitchell treatment as fulfilling the requisites of physiological

cord-rest more thoroughly than any other. He admits, however, that so far as the treatment of those affections which are unquestionably due to functional derangement of the brain is concerned, it has little or no application, and may be positively harmful. The essential features of the author's scheme of treatment for brain-rest, are; (1) Cerebral rest (progressively prolonged sleep); (2) increased general and cerebral nutrition; (3) diminution of psychical irritation and sensory impressions, particularly those of light and sound.

We have not space to give a general description of the author's treatment, neither can we attempt a review of the other interesting features in the little treatise. We must mention, however, the chapter on the "Mechanical Regulation of the Cerebral Circulation." It is illustrated by wood-cuts of ingenious appliances of the author's invention, to diminish the blood supply to the brain, and is replete with practical suggestion. To all persons interested in brain-rest—and who is not?—Dr. Corning's book will prove highly acceptable reading.

Psychiatry, a Clinical Treatise on Diseases of the Fore-Brain, based upon a Study of its Structure, Functions and Nutrition. By THEODORE MEYNERT, M. D., Professor of Nervous Disease and Chief of the Psychiatric Clinic in Vienna. Translated (under authority of the author) by B. SACHS, M. D., Instructor in Diseases of the Mind and Nervous System in the New York Polyclinic. Part I. The Anatomy, Physiology, and Chemistry of the Brain. New York and London: G. P. Putnam's Sons. 1885.

The compilation of a dictionary is stated, in an epigram by Scaliger, to be condign punishment for the most odious of crimes. Had that great man of letters lived in our day, he might have thought the translation into English of a German scientific work like this of

Prof. Meynert's, meet atonement for untold wickedness. We are not aware, however, that Dr. Sachs has been doing penance in his translation, and are free to acknowledge the great debt of gratitude under which he has placed the profession in this country by making into English so admirable a scientific treatise on diseases of the mind as the one before us. We use the word "scientific" advisedly, for no mere book-making zeal impelled the author to add to the already large literature on insanity. He was convinced of the need of such a book as he has written, and he further states in the preface that the least doubt as to the correctness of any views expounded in his book induced him to make halt until he had satisfied himself of their correctness by scientific investigation and reflection. Thus is accounted for the long interval which has elapsed since the book was begun—namely, since 1877.

The volume has come into our hands just as we go to press, and no complete review can be attempted. That Meynert is its author is, we are sure, sufficient to commend it to all. The first chapters, indeed the bulk of the first volume is anatomical in character, and will be of use mainly as a text-book. Dr. Sachs tells us, however, and meanwhile we are willing to take his word for it, that students of psychiatry, of physiology and of psychology may gather much information and much food for reflection from the subsequent chapters of the treatise.

As regards the theory of predisposition, and more particularly the doctrine of heredity, Prof. Meynert has deemed it necessary to criticise Darwin's theory of the inheritance of acquired faculties, as has been done before him by other German authors, among them DuBois Reymond and Weissman.

"It is," he says, "taking altogether too simple a view of things to regard morality as one of man's talents, and as a definite psychical property which is present in some persons and absent in others. Indeed, there is great truth in Weissman's observation: 'Talents do not depend upon the possession of any special portion of the brain; there is nothing simple about them, but they are combinations of many and widely different psychical faculties.'"

He warns as against the danger of casting too great a suspicion upon the limits of mental health by considerations of hereditary predisposition and the errors of organization which constitute the basis of predisposition. "Thinking physicians will avoid this danger, for they will distinguish between those who are possibly 'called' to disease, and that fortunately smaller number of persons who are, in the saddest sense of the term, 'chosen' for disease."

The typographical and xylographical execution of the work leave nothing to be desired, and we cannot commend too highly the excellence of Dr. Sachs' translation.

Klinische Psychiatrie. Specielle Pathologie und Therapie der Geisteskrankheiten. By DR. HEINRICH SCHUELE, Illenau, Leipzig. F. C. W. Vogel, 1886.

It is with great pleasure and satisfaction that we announce the receipt, as a new year's gift from the author, of the third edition of his handbook. In the pleasant letter which accompanies the volume, the author calls it an entirely new work, and this indeed it is, wherefore our review must be held over till the next number of the JOURNAL.

D.

NOTES AND COMMENTS.

THE CASE OF RIEL.—Riel was hanged on November 16. All the efforts made to procure a commutation of the sentence failed. An appeal was made to the Judicial Committee of the English Privy Council for a new trial but without avail. The appeal was based on the fact that the trial was conducted in contravention to English Common law and therefore *ultra vires*. The procedure objected to was, viz:

1st. Only six of a jury instead of twelve of the prisoner's peers.

2d. A stipendiary magistrate tried this case and being only such could not try a case of treason involving life and death.

3d. There was no Grand Jury to sift the evidence against the prisoner and thus no presentment could be brought in, as an additional safeguard against injustice.

4th. Sufficient time had not been given before trial to make inquiry into the mental condition of the prisoner.

5th. There was no proper impounding of a petit jury, seeing the presiding magistrate could select any persons he thought fit to be jurymen and did so at the trial.

The Privy Council held that as these charges in law were statutory in the Canadian Territories, the Council had no right to interfere, as under the Canadian Act of Confederation all such laws were held to be valid and had not been appealed against when legislated upon. This ended the appeal to England.

An effort was made to influence the Canadian Government. Under law the execution could not take place until specific orders were sent from the Governor General in Council. Two respites had been granted but only four days before the execution a warrant was issued to hang Riel, and it was done accordingly. Seeing that the jury had recommended the prisoner to

mercy; seeing that two respites had been granted; seeing that it was a political offense; seeing that positive evidence existed of Riel having been insane and having been legally committed as such to three asylums; seeing that strong evidence existed as to his unsoundness of mind after actual hostilities had commenced and that there was no proof of his having had anything to do with the armed opposition, beyond being a mere figure-head of designing men, it was felt that imprisonment for life would have subserved all the ends of justice. Political rancor, intrigue, religious animosities and race prejudices decided the fate of this unfortunate man, irrespective of any other consideration. The medical and specialistic feature of the case was relegated to a secondary position. A commission of qualified and impartial medical men to inquire into Riel's mental condition was refused. A post-mortem of his brain by a well-qualified pathologist was also refused, lest it might complicate political matters were the brain found to be diseased.

Now that the excitement consequent on the rebellion has ceased, it is felt that Riel's execution was a grave mistake.

RETIREMENT OF DR. PLINY EARLE.—Although for nearly a year it has been an open secret that Dr. Earle would resign the superintendency of the Northampton Lunatic Hospital, news of his actual retirement from office, which occurred October 1st ult., will be received with universal regret. We may echo the comment of the *Hampshire Gazette*, that "it is no exaggeration to say, that Dr. Earle has been a model official, and that he has accomplished a work for the institution that will stand the test of time and bear rich fruit many years hence. He has been a steady, painstaking, methodical

worker, planning on a broad and liberal scale, and doing whatever he has undertaken with remarkable attention to every detail and with patient devotion to the welfare of the institution. He has been for 21 years, like a successful general at the head of an army, and his example will long be quoted by his successors in office and by the managers of other public institutions." For the present, he will remain at the hospital, by special invitation of the trustees.

At a meeting of the trustees of the State Lunatic Hospital at Northampton, on Thursday, July 2d, A. D. 1885, the following resolutions were unanimously adopted:

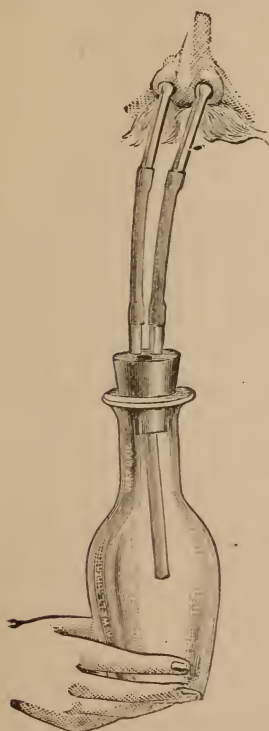
Resolved, That in accepting the resignation of Dr. Pliny Earle, Superintendent of this Hospital, the trustees have reluctantly yielded to the conviction that his advancing years and impaired health demand rest and relief from the responsibilities and labor of his position.

Dr. Earle has been at the head of this Institution twenty-one years, and, during nearly all that period, has also been its treasurer. In its management he has combined the highest professional skill and requirement with rare executive ability. By his thorough knowledge, his long experience, his patient attention to details,—by his wisdom and firmness, his absolute fidelity to duty, and devotion to the interests of the Hospital, he has rendered invaluable services to the Institution, and to the community which it serves. The trustees are deeply sensible of the assistance which he has given them in the discharge of their duties, and follow him, in his retirement, with the assurance of their highest respect and esteem.

Resolved, That the trustees indulge the hope that Dr. Earle will continue to make his home in this institution, that they may continue to profit by his counsels; and they will provide that his rooms shall be always open and ready for his use.

Resolved, That these resolutions be entered upon the records of the Board, and that a copy thereof, attested by the Chairman and Secretary, be transmitted to Dr. Earle.

DEECKE'S INHALER.—This apparatus has been devised by the Special Pathologist of the New York State Lunatic Asylum for the purpose of facilitating the inhalation of gases, as oxygen, etc., or air charged with the vapors of various volatile substances, as oil of turpentine, &c., carbolic acid, iodine, &c. It is constructed upon the principle of conveying these remedies as far down into the respiratory passages as possible by applying the two small glass bulbs at the end of the inhaling tubes to the nostrils, thus inhaling through the nasal openings with each breath by exhaling through the mouth.



Care should be taken that the inlet tube reaches so far down into the bottle that its end is always about an inch below the level of the fluid.

For the inhalation of gases the bottle is filled to about one-half with water at ordinary temperature, the glass tube passing downward into the bottle is drawn upward to about one inch above the stopper, and with it the connection made, by the use of a rubber tube, with the cylinder containing the gas. For inhaling vapors the glass is pushed down to the upper level of the stopper, and the bottle filled to about one-third with warm or even hot water, charged with a few drops of the inhaling liquid or mixture. In order to keep the fluids at a uniform temperature during inhalation the bottle may be placed in any suitable vessel containing hot water. In order to secure a uniform influx of air,

the area of both outlet or inhaling tubes together should be equal to that of the one inlet tube, while the lumen of all the tubes should be such that no forced breathing or inhalation is necessary, unless desired or specially directed.

A DISPENSARY FOR MENTAL AFFECTIONS.—The Managers of the Pennsylvania Hospital, who have under their supervision the General Hospital at Eighth and Spruce streets, Philadelphia, and the two departments for the insane in West Philadelphia, have established, at the department for out-patients at the General Hospital, in addition to their other dispensary services, one for mental affections.

This department is under the medical charge of the physicians at the department for the insane. At present the dispensary department is open on Monday and Friday afternoons of each week at three o'clock. The term of service at the dispensary for each medical officer has, we believe, been fixed at three months.

Although this department has only been established since November 1st, and has, therefore, not been in operation for a sufficient period to become familiar to the profession or public, the number of applicants indicates that there is, in large cities like Philadelphia, a field for a service of this description. In the two months of its operation eighteen new cases have applied and nineteen re-visits have been made.

The object of the dispensary is to afford advice and treatment to such cases of the indigent insane as apply in the incipency of their attacks, and the cases who have thus far visited the dispensary belong, we understand, almost wholly to this class.

One of the pleas made by the advocates of home treatment for the insane has been that in many

instances the insane were placed in asylums too early, that recovery might have taken place at home, and the patient saved the so-called stigma of asylum residence. While we have little sympathy with arguments of this kind, believing (and in this belief statistics support us) that more harm is done by delay than can possibly occur by too early committals to asylums, yet we see in the experiment of the Managers of the Pennsylvania Hospital a departure which in time, as experience shall accumulate, will throw valuable light upon the subject of asylums and non-asylum treatment of the insane. If there is a class of cases—and we believe there is—who under the observation of experienced asylum physicians in a dispensary of this kind, can be treated out of asylums, such a service ought to afford results upon which valuable conclusions can be based. If on the other hand this offer of the Managers and their medical staff to furnish experienced advice and treatment to the indigent insane, at a period of the disease when treatment is the most successful, is not taken advantage of, it will demonstrate in a measure that there is little call for home treatment, and that the cry against too early commitments to asylums has no real basis.

ASYLUM APPOINTMENTS.—Dr. William B. Goldsmith has been appointed Superintendent of the Butler Insane Hospital, Providence, R. I., in the room of Dr. Sawyer, deceased. Dr. William A. Gorton has been promoted from the position of First Assistant Physician to the Danvers Hospital to that of Superintendent, made vacant by the resignation of Dr. Goldsmith.

OBITUARY.

LORD SHAFTESBURY.

If some men are "born great" and others have "greatness thrust upon them," there are those who acquire greatness through the conscientious and persevering development of their inherent qualities. The late Lord Shaftesbury, whose departure from this life all England was called to deplore on the 28th of September last, was one of the few noblemen whose figure stands pre-eminent in the memory of his day and generation, for a characteristic very different from the "characteristics" of one of his ancestors, of Deistic fame—the enthusiasm of humanity. And as that enthusiasm embraced, among its multitudinous objects, the great and widely extended charity of provision for the insane, making itself acquainted with the whole field of its administration down to its minutest details, no apology is required for this notice in the pages of a journal devoted to that specialty. Our readers have frequently been treated to copious extracts from his very protracted evidence, given before the Parliamentary Commission of 1877, which evinced an astonishing familiarity with the whole history of provision for the insane, and with all the difficulties heretofore overcome or still remaining, and all the principles which experience has shown should govern the practical management of this vast interest.

Lord Shaftesbury's surname, Ashley Cooper, was derived from the union by marriage of two families in the reign of James I, and the first Earl was raised to the peerage of Charles II. The sixth Earl married the daughter of the third Duke of Marlborough, who was the mother of the subject of this notice. Her portrait

was painted by Sir Joshua Reynolds, and she died so late as the year 1867, at the age of ninety-two years. The family seat, St. Giles House, Dorsetshire, has belonged to the Ashley-Coopers since the seventeenth century, and is famous for its library, seventy feet long, which contains among its treasures, the MSS. of Handel's Oratorios, and also for being one of the strongholds for the meeting of Parliament during the war of the Great Rebellion. In the drawing-room of this mansion, among other notable objects, may be seen a fine marble bust with this inscription: "Presented to Emily, wife of the seventh Earl of Shaftesbury, by the operatives of the manufacturing districts of the North of England, as a token of their esteem and regard for the persevering and successful efforts of her noble husband in promoting, by legislative enactment, a limitation of the hours of labor of children, females and young persons employed in mills and factories." Here the late Earl was born April 29, 1801, and here, by his own wish, rest his remains, although his funeral obsequies were held at Westminster Abbey. He was educated at Harrow, and Christ Ch., Oxford, graduating in 1822. Four years after he entered Parliament, in the Lower House, for the borough now represented by Lord Randolph Churchill. In 1830, he married a daughter of Earl Cowper. He soon came under the religious influence of Simeon and the Clapham School, and like Howard, devoted himself to the improvement, by legislation, of the condition of the poorest or most unfortunate classes of the population. New inventions had thrown vast numbers out of employment, and prisons and alms-houses were crowded. It is incredible now that Lord Ashley should have encountered so much opposition to his benevolent plans. He never took his facts at second hand. He personally visited

and investigated mills, factories, mines, prisons, costermongers' stalls and houses, the slums of London, prisons, alms-houses, and asylums for the insane. His speeches in Parliament revealed such horrors as to be received with utter incredulity, until Commissions of Inquiry were sent to verify the facts. The result was the "Factory Acts" of 1833, as a first installment. Still, children from five years old and upwards were found by hundreds working in mills and mines and factories of various kinds, with fearful mortality. The details were simply horrible. In 1842, he secured the passage of the law prohibiting the employment of women, or of young children under fourteen in mines or collieries, and no one under twenty-one could be in charge of an engine. In 1845, he secured further Acts for the regulation of juvenile labor in calico print works, and for the better care of the inmates of lunatic asylums.

In 1846, he exposed the slums of London, very much worse than now, finding hundreds of waifs and strays amidst revolting squalor. Little children employed by chimney sweeps were often suffocated. He organized the system of "ragged schools," and was president of that association down to the day of his death. In 1848, there were sixty of these schools with 10,000 children. In 1883, he said these schools had "picked from the streets 300,000 boys and girls, all of whom, but for this, would have been found ere long among the dangerous classes." A large number also were organized into a "shoe-black brigade," who thus earned their living.

In 1851, he secured the passage of an Act for the registration of common lodging houses, the best law, Charles Dickens said, ever gotten through Parliament, and one that resulted in such "monuments of benevolence" as the Peabody buildings, Queen's Park,

Shaftesbury Park, &c. The Shaftesbury Park, in Battersea, opened in 1874, and has 1,200 dwellings accommodating 8,000 persons, families of clerks and artisans.

In 1851, by his father's death, he took his seat in the House of Lords and had very great influence with the Prime Minister, Lord Palmerston, and his successors. His whole term of service in Parliament was fifty-six years, and it is largely due to his long and persevering activity that the legislation of England in regard to labor and the care of the insane, stands at this day as a model which the rest of the world is content to imitate.

He was associated with Hon. Mr. Gordon in the first Committee on Inquiry into the condition of the insane in 1828, and from that time for twenty years he was in the habit of frequent visitation personally to the various institutions and private retreats where the insane were cared for. He was active in procuring the successive steps in legislation that culminated in the General Act of 1845, which digested all preceding statutes, and created a permanent Board of Special Commissioners in Lunacy, six of whom were paid. Of this Board, Lord Shaftesbury was chairman down to the day of his decease during the present year. Previous to 1845, only occasional and transient commissioners were appointed who were paid according to the time they gave. Three of the commissioners, including the chairman, were nominated by the Lord Chancellor, to visit and keep some account so far as possible, of the private or "single" patients. In his evidence before the Parliamentary Commission of 1877, Lord Shaftesbury enlarged upon the vast improvement in the system of lunacy's laws and management that had taken place during the fifty years of his experience

in the subject. Even then few were living who could recall like himself "the horrible and disgraceful position" of the insane at that early day when his efforts for its amelioration were commenced. The Act of 1845, as improved in 1853, had, in his opinion, left very little to be desired in the present management of asylums, and the general provision for the insane. It was probably in consequence of his testimony, drawn from very intimate knowledge of the whole subject, against the prevalence of any real abuses in the admission or detention of patients, that prevented that Commission from reporting any change or modification in the existing law. In fact whole treatises on some branches of the subject might be compiled from his voluminous testimony before that Commission.

DR. JOHN WOODBURY SAWYER.

Died 14th December, 1885, Dr. John Woodbury Sawyer, of the Butler Hospital, aged 51 years.

The following is the published report of the case, as communicated to the Rhode Island Medical Society, on December 17th, by Dr. J. W. C. Ely, of Providence, the attending physician:

Dr. Sawyer was taken sick on Friday afternoon December 11th. After dinner while going up stairs he felt a sharp pain on the left side of his throat beneath the submaxillary gland. After tea he had a chill which lasted about two hours and which kept him shivering although he was not cold. The next morning the 12th, Dr. Ely saw him. His temperature was then 102.2, pulse 106, (Dr. Sawyer's normal pulse was 60) and respiration 16. His tongue was coated a yellowish brown, and there was a hard and brawny swelling on the left side of his neck. It seemed to Dr. Ely that all the cellular tissue was infiltrated, involving the gland. Dr. Sawyer had said three or four months before that he thought his lymphatic glands were enlarged, and Dr. Ely at that time detected a small one at the back of the neck. The action of the heart was

very feeble, the pulse rebounding. That same night at one o'clock the pulse and temperature were the same, but the voice had grown husky, and Dr. Sawyer was afraid that he had membranous inflammation of the larynx, but on examination this supposition was not verified. On the morning of the 13th, Dr. Ely visited the patient again, accompanied by Dr. Carr. The temperature was 101.2, the pulse 106 but its character was better. The swelling of the neck had not increased, but the patient complained of sensations indicative of quinsy. On Monday morning, the 14th, the patient had apparently held his own; during the day and the night had taken a good deal of nourishment in liquid form. But at 5.30 o'clock that evening, when, by appointment, Dr. Ely met Dr. Carr and they proceeded together to visit Dr. Sawyer, they found a great change for the worse. The temperature at noon had been 103.8, at four o'clock the same, the pulse 130 or 140, and respiration 32. At 2.30 o'clock he had a chill, but not a severe one. After this he was wholly unable to swallow anything and his voice was gone to a whisper. The inflammation on the left side had progressed nearly to the median line and down toward the chest, and an erysipelatous flush had extended along the right side of the neck with the accompanying fullness, but without the hardness. The hands were inclined to be a little livid, showing more or less asphyxia. An incision was made to try to get pus and relieve the swelling, but none came, the venous blood was black and there was no relief. Tracheotomy was then performed, but Dr. Sawyer did not live two minutes after the operation. Dr. Ely further said that the history of the family showed that Dr. Sawyer's father had died at the age of 82, of congestion of the lungs; his mother was still living and he had lost two sisters of consumption. He did not think that Dr. Sawyer had had any trouble with his kidneys, as had been suggested by the peculiarity of his complexion. The cause was evidently some septic poison; but Dr. Ely could offer no theory of the origination of this poison.

In answer to a question by Dr. Storer of Newport, Dr. Ely said that he had not discovered any injury to the throat.

Dr. Storer then stated that about ten days before his death Dr. Sawyer had attended a maniacal case in consultation with himself and Dr. Thomas Parker at Newport, with a view to its removal to the Butler Hospital.

During the visit, the patient, a strong athletic young man, had sprung at Dr. Sawyer, and clutched him by the throat, and if the policemen who were in attendance had not dragged him off, the

doctor would have been at the time seriously injured. He had thought that the violence done the throat by this assault might have induced, with a predisposition to trouble there, the fatal affection.*

Dr. Ely said that Dr. Sawyer never told him of the accident.

Drs. Storer and Batcheller in brief addresses, paid tribute to the memory of their deceased friend.

On motion of Dr. Newell, the Chair appointed Drs. Storer, Ely and Batcheller to frame resolutions embodying the Society's realization of its loss, etc.

The following preamble and resolutions, submitted by this committee, were unanimously adopted by a rising vote:

WHEREAS, An inscrutable Providence who wounds only that through His own mysterious reasons He may really benefit, has taken from the Rhode Island Medical Society its beloved Vice President, Dr. John Woodbury Sawyer, therefore,

Resolved, That in Dr. Sawyer not only had the Butler Hospital a medical superintendent whose first and only thought was the welfare of the unfortunates whom it was his duty to protect, to care for and to heal, but a judicious adviser, who added much to its previous reputation as a model institution.

Resolved, That the loss of Dr. Sawyer is one equally great to the city of his residence and to the State at large, so many of whose citizens have had occasion to require his kindly skill.

Resolved, That the R. I. Medical Society mourns its deceased brother, whose mere acquaintance was a pleasure, and whom to know was to love. Gentle and yet decided, modest always, and wholly forgetful of self, learned in his special department of professional labor, and yet inferior to none as a general practitioner, his death leaves a void which time can never more than imperfectly fill.

Resolved, That the President and Secretary, in behalf of every member, tender to the bereaved widow and orphaned son of the deceased their sincere and heartfelt condolence, and their sense not only of collective but of personal bereavement.

Resolved, That a committee of—, to be appointed by the chair, attend the funeral of Dr. Sawyer in behalf of this Society, as an additional mark of sympathy and respect.

*From the above it seems more than probable that Dr. Sawyer is still another Medical Superintendent who has perished at the post of duty, another martyr whose life has been sacrificed in the attempt to relieve a suffering patient:

The chair then stated that the Society as a whole would be named to fill the blank in the resolutions.

The funeral was solemnized in the chapel of the asylum at noon on Friday, December 18th, the Rev. T. Edwin Brown, pastor of the First Baptist Church, officiating. The chapel, which occupies a small space on the third floor of the centre building of the hospital, was completely filled, and a large number were compelled to sit outside the doors in the corridor during the service. The platform was reserved for the officers of the hospital and Board of Trustees, who were present in a body, together with Superintendent Woodbury and the physicians of the Rhode Island Hospital, the Superintendent of Dexter Asylum, and the Presidents of other Hospitals, Mayor Doyle, the Overseer of the Poor and other city officials. Seats were also reserved for the members of the Rhode Island Medical Society, who attended the services in a body, and the representation of out-of-town as well as resident physicians, was notably large. The employés of the institution and many of the patients were also present in a body, and friends and acquaintances in large numbers testified to their regard and sympathy for the dead by their attendance on these last rites. The body of Dr. Sawyer was embalmed and lay in a casket, metal-lined and broadcloth-covered. The top was completely concealed by flowers. At the foot of the casket reposed an anchor, the body of which was of white japonicas, and at the head was a wreath—two floral tributes that were very beautiful. At each of the four corners of the glass at the head lay a bunch of violets and loosely-tied bunches of roses, a wreath of lilies of the valley, and loosely made-up wreaths of japonicas with single roses, and japonicas and sprays of fern were strewn over the top. Masses of smilax formed a ground work for these

beautiful emblems. On the table beside the casket was a magnificent floral design, "The Gates Ajar," which was the tribute of the employés of the institution.

A meeting of the trustees was held at the Hospital immediately after the funeral, at which the following Memorial Minute was adopted, and ordered to be placed on the records, and also to be published:

John Woodbury Sawyer, M. D., Superintendent for the Butler Hospital for the Insane, died after a brief illness, on Monday, December 14, 1885, at the age of 51 years. He was born in Danvers, Mass., November 5, 1834, and received his medical education at Harvard University, where he graduated as doctor of medicine in 1859. He was immediately, by the selection of Dr. Ray, appointed to the office of assistant physician in this hospital, and here he spent the first two years of his professional life. He then entered upon the practice of his profession in Boston, and after the lapse of a little more than a year, he was appointed assistant superintendent of the State Hospital for the Insane at Madison, Wis. He had been engaged in discharging the duties of that position for nearly six years, when, on the resignation of the late Dr. Isaac Ray, he was chosen superintendent of this Hospital, and entered upon the duties of the office in January, 1867. The choice was made in accordance with the recommendation of Dr. Ray, who had had charge of the Hospital from its foundation.

From the day of his election to the day of his death, a period of nearly nineteen years, he has discharged the diversified duties of this office with unremitting assiduity, with rare wisdom and with distinguished success. As they look back over the long period of his connection with the Hospital, the trustees recall with unqualified satisfaction and with high and grateful appreciation the varied and laborious services which he has performed in its behalf, not only in his judicious and tender treatment of its patients and his watchful oversight of its interests, but also in the careful keeping of its accounts and the successful management of its farm. In each of these several spheres of official service he has shown the utmost fidelity to every trust, a breadth of capacity and a soundness of judgment equal to every emergency, and withal a kindness of heart and an elevation of character which, in an unusual

degree, have secured the confidence, the esteem and the highest respect of those with whom he has been associated. Under his watchful superintendence, and by his wise administration, the Hospital has widened the sphere of its usefulness, and improved its methods of sanitary treatment; its resources and its provisions for the care and comfort of its patients have been greatly enlarged; it has thus acquired new titles to public confidence and esteem, and has secured new friends in the new generation which has arisen since it was founded.

The personal qualities of Dr. Sawyer were such as did not fail to endear him very strongly to those who were associated with him in the care of the Hospital. His manners were gentle and winning; his character was marked by singular modesty, united with great firmness of purpose, by rare good judgment, by manly independence, by self-denying benevolence and by unfailing devotion to the duties he was called to perform. He has died at a moment the most unexpected, of which those who loved him had received no premonition, and when his plans were broadest and his hopes were highest, in the full meridian of his usefulness and his renown. The trustees mourn his loss not alone as the loss of an accomplished and faithful superintendent, eminent in his profession and honored in the community, but also as the loss of a personal friend, endeared to them by the graces which adorned his character and by the noble and generous services which filled his daily life.

To the above tribute there needs no addition, for it expresses perfectly the feeling of those who professionally knew Dr. Sawyer best. He is reported by a relative, Rev. Augustus Woodbury, of Providence, R. I., to have been descended from John Woodbury, an associated of Roger Conant, who was made a freeman in Massachusetts in 1631. His brother William was also made a freeman a few years later, the one settling in North Beverly, and the other in Beverly Farms. Dr. Sawyer's maternal uncle, Henry P. Woodbury, lived in Beverly, which is very near to Danvers, the place of Dr. Sawyer's birth. This Puritan descent explains many prominent features of Dr. Sawyer's character, and as his friends remember those calm,

sharply cut features, the straight hair, the clear eye, the compressed lips, the perfect self-command, they have only to picture him as clad in the garb of that earlier day, and they can see at once personified in himself, his ancestor, the old Massachusetts freeman of 1631. It was that very inherited nature which made Dr. Sawyer so quiet, so modest, so diffident in all things regarding himself. Carried almost to stoicism, unless it was the desire not to alarm his wife, of whom he was tenderly fond, it was this which made him refrain from speaking of the violence he had received to his throat at a patient's hands, just prior to his final illness. His last words to his friend Dr. Storer, on leaving Newport to return home, several hours after his injury, which was still causing him pain, were with reference to the great neglect of the authorities of that city in having neither an ambulance for transporting violently insane patients, nor a proper cell either at the police station or jail, or even at the Newport Hospital, for their temporary reception, and he promised to immediately bring before the Trustees of the Butler Hospital, it being a project which had already occupied his mind, the need of a branch of their own institution in the southern portion of Rhode Island, near Newport, to avoid the present difficulties of the removal of cases from that city to Providence.

Dr. Sawyer's was a well-rounded character. True ever to his convictions of duty, he gained the loving respects of his patients, his official co-laborers, and his professional friends. His life was a short one, indeed, counting years, but it was rich in results. The deep wound that his loss has brought to the Rhode Island Medical Society is already seen, in the words of its resolutions of condolence, to have been inflicted only that it might benefit, for not Providence physicians

merely but those of the whole State have been forced to appreciate (as they might not so clearly perhaps have done had Dr. Sawyer's life been spared) what a noble brother they had among them; what a manly associate; and what an example worthy of their best efforts to emulate has been taken from their midst.

*

DR. JOSHUA HUSBAND WORTHINGTON.

Dr. Joshua Husband Worthington, a well known retired physician, died at his residence, No. 11 East Penn street, Germantown, December 27, in the sixty-ninth year of his age. He was born in Hartford county, Maryland, on August 8, 1817, being the son of a prominent member of the Society of Friends. He received his medical education at the Jefferson Medical College, where he graduated in 1838. For four years thereafter he practised in his native place, and then came to Philadelphia where he had since resided. In 1842, or shortly after his location here, he was made Resident Physician of the Friends Asylum near Frankford, and became its Superintendent in 1850, filling that office until 1877, when he resigned and was succeeded by the present Superintendent, Dr. John C. Hall. He was a member of the Association of Medical Superintendents of American Institutions for the Insane, and a prominent member of the American Medical Association, and was identified with all the important, local and State associations, serving as Vice-President of the State Medical Society in 1859. He became distinguished in his treatment and studies of insanity, and his contributions to the literature of the profession were many and valuable. In connection with Dr. Charles Evans, from 1843 to 1850, he published eight reports of the Frankford Asylum, and after that, for some years, be-

came their sole publisher. Since his retirement from that institution he had been living quietly at his home in Germantown. In 1860, he married Mary W. Kimber, of this city, and after her death, Sarah, daughter of Stacy B. Collins of New York.

DR. T. R. H. SMITH.

As we go to press we learn with great regret of the death of Dr. T. R. H. Smith, of the Fulton Lunatic Asylum, Missouri. He was buried on Christmas day. A further notice will appear in our next issue.

AMERICAN JOURNAL OF INSANITY, FOR APRIL, 1886.

ON THE PHYSIOLOGY OF THE BRAIN AND ITS RELATIONS IN HEALTH AND DISEASE TO THE FACULTIES OF THE MIND.*

BY H. A. BUTTOLPH, M. D.,
Short Hills, N. J.

[CONTINUED FROM THE JANUARY NUMBER.]

The following biographical sketches of Gall and Spurzheim, together with selected statements from believers and advocates of their system, are herewith presented as strongly confirmatory of the facts of their eminent ability, natural and professional; also, of the great scientific value and wide application of the truths propounded by them.

For these facts and statements, I am much indebted to the *American Phrenological Journal*, to "Capen's Reminiscences of Spurzheim," and to "Boardman's Defence of Phrenology."

FRANÇOIS JOSEPH GALL.

François Joseph Gall was born in the village of Tiefenbrunn, within the district of the Grand Duchy of Baden, on the ninth of March 1759. His father was a merchant by profession, and a man of considerable distinction and character for his circumstances. Scarcely any information whatever can be gleaned from the writings of Gall, or from any other source of the character of his

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

mother, or the history of his brothers and sisters. It appears that his parents were professors of the Roman Catholic religion and for some reasons had intended him for the service of the Church. His education was therefore early attended to, and his studies directed in accordance with his future pursuits.

In the ninth year of his age, Gall was placed by his parents under the care and tuition of an uncle who was a clergyman, residing at a place not far distant, called the Black Forest. Here he remained for some years, a diligent and successful scholar. Afterwards he prosecuted his studies for sometime at Baden, then at Brücksal, and also at Strasburg. As a student Gall was distinguished more for originality and solidity of talent, than for display and brilliancy. As a scholar, he was respectable, but excelled most in branches involving principles of science and philosophy. He was passionately fond of the studies of nature, and frequently resorted to the country and the forests to make observations on butterflies, insects, birds and other tribes of the animal kingdom. This spirit of enquiry and observation was undoubtedly the key which opened to him the way to his future discoveries. Having arrived at the age of manhood, it was necessary for him to make preparations more directly appertaining to his profession. Though his parents had intended him for the Church yet his natural dispositions were averse to such a course; and having become already interested in studies connected with medical science he was led to turn his attention to the healing art.

Vienna, at this time, contained the most distinguished medical school which could be found in the interior part of Europe. Hither Gall repaired, while in the twenty-third year of his age. Here he enjoyed very superior advantages for obtaining a thorough knowledge of his profession, and his future career evidently shows that they were neither neglected nor unimproved. After completing his studies at the university, Gall entered upon the practice of medicine in Vienna. In the year 1796, he commenced giving public lectures on his new discoveries respecting the functions of the brain. We will here present a brief account of the manner in which he was led into this course of discovery and investigation.

"From my earliest youth," says Dr. Gall, "I lived in the bosom of my family, composed of several brothers and sisters, and in the midst of a great number of companions and schoolmates. Each of these individuals had some peculiarity, talent, propensity, or faculty which distinguished him from the others. This diversity determined our indifference or our mutual affection and aversion, as well as our contempt, our emulation and our connections. In

childhood, we are rarely liable to be led astray by prejudice; we take things as they are. Among our number, we soon formed a judgment who was virtuous or inclined to vice, modest or arrogant, frank or deceitful, a truth-teller or a liar, peaceable or quarrelsome, benevolent, good or bad, &c. Some were distinguished for the beauty of their penmanship; some by their facility in calculation; others by their aptitude to acquire history, philosophy, or languages. One shone in composition by the elegance of his periods; another had always a dry harsh style; another reasoned closely, and expressed himself with force. A large number manifested a talent or a taste for subjects not within our assigned course. Some carved, and drew well; some devoted their leisure to painting or to the cultivation of a small garden, while their comrades were engaged in noisy sports; others enjoyed roaming the woods hunting, seeking birds' nests, collecting flowers, insects or shells. Thus each one distinguished himself by his proper characteristic, and I never knew an instance, when one who had been a cheating and faithless companion one year, became a true and faithful friend the next."

Gall had observed that those scholars with whom he found the greatest difficulty in competing in verbal memory, were distinguished for large prominent eyes. He made very extensive observations on this point, and was finally led to suspect that there must be some necessary connection between memory for words and the size and projection of the eye. "In following out by observations the principle which accident had thus suggested, he for some time encountered difficulties of the greatest magnitude. Hitherto he had been altogether ignorant of the opinions of physiologists, touching the brain, and of the metaphysicians, respecting the mental faculties, and had simply observed nature. When, however, he began to enlarge his knowledge of books, he found the most extraordinary conflict of opinions prevailing; and this for the moment made him hesitate about the correctness of his own observations. He found that the moral sentiments had by an almost universal consent been consigned to the thoracic and abdominal viscera; and that while Pythagoras, Plato, Galen, Haller, and some other physiologists, placed the sentient soul or intellectual faculties in the brain Aristotle placed it in the heart, Van Helmont in the stomach, Descartes and his followers in the pineal gland, and Drelincourt and others in the cerebellum."

He observed also, that a great number of philosophers and physiologists asserted, that all men are born with equal mental

faculties; and that the differences observable among them are owing either to education or to accidental circumstances in which they are placed. But being convinced, by facts, that there is a natural and constitutional diversity of talents and dispositions, he encountered in books a still greater obstacle to his success in determining the external signs of the mental powers. He found that instead of faculties for languages, drawing, distinguishing places, music, and mechanical arts, corresponding to the different talents which he had observed in his schoolfellows, the metaphysicians spoke only of general powers, such as perception, conception, memory, imagination, and judgment; and when he endeavored to discover external signs in the head corresponding to these general faculties, or to determine the correctness of the physiological doctrines regarding the seat of the mind, as taught by the authors already mentioned, he found perplexities without end and difficulties insurmountable.

Dr. Gall, therefore, abandoning every theory and preconceived opinion, gave himself up entirely to the observation of nature. Being physician to a lunatic asylum at Vienna, he had opportunities of which he availed himself, of making observations on the insane. He visited prisons, and resorted to schools; he was introduced to the courts of princes, to colleges, and the seats of justice; and whenever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he observed and studied the development of the head. In this manner, by an almost imperceptible induction, he conceived himself warranted in believing that particular mental powers are indicated by particular configurations of the head.

The successive steps by which Dr. Gall proceeded to his discoveries, are particularly deserving attention. He did not, as many have imagined, first dissect the brain, and pretend by that means to have discovered the seats of the mental powers; neither did he as others have conceived first map out the skull into various compartments, and assign a faculty to each according as his imagination led him to conceive the place appropriate to the power. On the contrary he first observed a concomitance between particular talents and dispositions, and particular forms of the head; he next ascertained by removal of the skull, that the figure and size of the brain are indicated by these external forms; and it was only after these facts were determined that the brain was minutely dissected, and light thrown on the structure.

It was thus, not until after more than twenty years of observa-

tions, and with the best facilities for making researches that Gall first ventured to present his peculiar views to the public. He had during most of this time extensive practice as a physician at Vienna—ranked high as a man of science—associated with the first men of the place and in the nation, and was connected with several public institutions. His lectures were continued from 1796 to 1802, and were attended by audiences the most intelligent and respectable. Many distinguished strangers, as well as some of the foreign ambassadors at the court of Vienna, encouraged him in his labors privately, and honored him with their attendance publicly. Prince Metternich was a pupil of Dr. Gall, and afterwards renewed his acquaintanceship with him in Paris, during his residence there as Ambassador to Napoleon. Considerable interest was now created on the subject, several scientific gentlemen, who had heard his lectures, published reports of them in different periodicals and works. Some through ignorance and prejudice opposed his discoveries. It was represented to the Emperor that Gall's views were injurious to good morals and dangerous to religion. This opposition arose from two sources. First, from the influence of Dr. Stifft, then physician to the Emperor, and president of the medical faculty. It is stated on good authority, that Dr. S. was a man of no talent as a physician, but a great politician and intriguer. The second source of opposition arose from the overwhelming influence of an ignorant, bigoted and corrupted clergy.

Accordingly, an edict was issued on the 9th of January, 1802, by the Austrian government, prohibiting all private lectures, unless a special permission was obtained from the public authorities. Dr. Gall presented to the officers of government a very able remonstrance in defense of his views, and in favor of public lectures on the same; but it was all in vain, and the efforts of his friends in his behalf were equally unavailing. Gall, finding that all prospect of communicating and defending publicly his new discoveries in Austria was cut off, determined to seek a country whose government was more liberal and tolerant. He had now passed the meridian of life—being in the forty-fifth year of his age—had spent the best of his days at Vienna, and there hoped in peace to live, labor, and die; but, *truth* was dearer to him than ease, pleasure, wealth or honor. Few can conceive the immense sacrifice which he must have made in giving up an extensive professional business and public confidence in breaking away from the society of all his acquaintances and relatives, and

leaving what had become more valuable in his estimation than all the rest, the greater portion of his craniological specimens, which he had been more than thirty years in collecting.

On the 6th of March, 1805, Dr. Gall left Vienna, accompanied by Dr. Spurzheim, who had now been with him nearly five years. They first visited Berlin, and afterwards continued their tour repeating their lectures and anatomical demonstrations in more than thirty towns of Germany, Prussia, Holland and Switzerland, until they arrived at Paris, in the month of November, 1808. In these travels, says Gall, "I experienced everywhere the most flattering reception, sovereigns, ministers, philosophers, legislators, artists, seconded my design on all occasions, augmenting my collection and furnishing me everywhere with new observations. The circumstances were too favorable to permit me to resist the invitations which came to me from most of the universities. This journey afforded me the opportunity of studying the organization of a great number of men of eminent talents, and of others extremely limited, and I have the advantage of observing the difference between them. I gather innumerable facts in the schools and in great establishments of education, in the asylums for orphans and foundlings, in the insane hospitals, in the houses of correction, in prisons, in judicial courts, and even in places of execution. The multiplied researches on suicides, idiots and madmen, have contributed greatly to correct and confirm my opinions.

It was during this tour that Gall made his celebrated visit to the prison in Berlin, and to the fortress of Spandau. Here the practical application of the new doctrine was put to a searching test. The interest excited by the novelty of the scene was not greater than the astonishment produced by the results of the process. On the 17th of April, 1805, Gall visited the prison of Berlin, in company with the directing commissaries, the superior officers of the establishment, the inquisitors of the criminal deputation, the counsellors, assessors, medical inspectors, &c., &c. In their presence he examined over two hundred prisoners, picked out and arranged into separate classes, those convicted of murder, robbery, theft, &c., and stated many things remarkably correct concerning their previous history and character, as well as respecting the particular kind and degree of crime for which they were imprisoned. His visit at the fortress of Spandau was no less interesting. Here he examined over four hundred convicts, and was equally successful in detecting their

crimes and delineating their characters. Reports of these visits were published at the time in several periodicals, and created no little sensation in various parts of Europe.

From November, 1807, Gall made Paris his permanent residence. In the months of November and December, Gall assisted by Spurzheim, delivered his first course of lectures in that city.

In 1809, Gall and Spurzheim commenced publishing their magnificent work, entitled "The Anatomy and Physiology of the Nervous System in General, and of the Brain in Particular; with Observations upon the possibility of ascertaining several Intellectual and Moral Dispositions of Man and Animals, by the Configuration of their heads. 4 Volumes folio, with an Atlas of 100 plates. Price 1,000 francs."

This great work was continued by their joint exertions to the completion of two and a half volumes, and was ultimately finished by Gall, in 1819. In the meantime he delivered several courses of lectures, which were attended by respectable audiences, composed mostly of medical students, and literary and scientific men. Spurzheim left Paris, 1813, for Great Britain; and ever after that period they prosecuted their researches separately.

The following description of Gall is from the pen of Dr. Elliotson, formerly professor in the University of London. "I have seen Dr. Gall—seen much of him, and had repeated conversations with him on phrenological points, and on the history of his discoveries. He lectures in Paris to a class of above one hundred, at the *Athénée Royal*. His course consists of sixty or seventy lectures, and he spends several days in dissecting. When at the end of the hour, he asks whether he shall proceed, the audience applaud violently, and he often continues two, and upwards of three hours. Dr. Gall ranks high in Paris; he is physician to ten ambassadors—has great practice—is considered a savant—and bears himself, and lives handsomely, like a gentleman.

Gall's head is magnificent; and his countenance, dress and manners, with the depth continuousness, liberality and simplicity of his remarks, show you that you are in company with a profound philosopher—a perfect gentleman—and a most kindhearted friend. He is perfectly free from affectation or quackery; pursues truth only regardless of all consequences; and has sought it at an immense expense, and free from all interested motives. He knows the importance and reality of his discoveries; and

though perfectly modest and simple forms the just estimate of himself that posterity will form, and feels secure of immortality. I advised him to write some popular work, but he objected; said he had written for the students only, for those who desired to understand the subject thoroughly; that he had composed a work for posterity, and must leave to others the occupation of writing for loungers."

In the year 1820, a gold medal was presented to him, executed by M. Barre, an eminent artist of Paris, by order of Count Potosky, a rich Polish nobleman, who took this method of expressing his deep gratitude to Dr. Gall, who had cured him of an old and dangerous malady, for which he had in vain consulted the best medical men in Paris.

In March, 1828, at the close of one of his lectures, Dr. Gall was seized with a paralytic attack, from which he never perfectly recovered, and which ultimately ended his life, August 22d, 1828, in the seventy-second year of his age. His remains were followed to the grave by an immense concourse of friends and admirers, five of whom pronounced discourses over his grave as is the custom in France on such occasions. A gentleman in Paris, who was not a phrenologist, writing about this time on various topics to Dr. A. Combe, of Edinburgh, expresses himself as follows: "You will, I am sure, be more affected by the death of Dr. Gall, than by any political event. In truth it is an immense loss to science. Whatever opinion we may form of the system of that illustrious man, it must be acknowledged that he has made an immense stride in the science of medicine and of man. You must have been satisfied with the homage paid to his memory by the side of his grave, by whatever distinguished men Paris possesses." Dr. Fossati, in his funeral discourse, has the following touching paragraph: "What an irreparable blank do I perceive in the scientific world by the death of one man! A blank which will long be felt by all the friends of science and of sound philosophy. But what a man have we lost! what a genius was his! Yes; Dr. Gall was one of those privileged individuals—what a happy organization nature had given him—whom the Creator sends upon the earth at the interval of ages, to teach us how far human intelligence can reach."

"I have not yet alluded to the qualities of his heart—to the deep sentiment of justice, and the warmth and constancy of benevolence, by which he was distinguished. Time does not permit me to dwell on these qualities; but artists, young

physicians, and many unfortunate persons of every condition, now testify by their tears the loss of a benefactor * * * but they will make way for a moment to those rich patients, to princes, to the representatives of Kings, whom his art restored to health, and allow them to bear witness before posterity. How often Dr. Gall came to implore their aid in solacing and assisting unfortunate but deserving men of talent, whom his own means were inadequate to relieve. Let these persons tell us too whether Gall ever solicited for himself, or if he did not always beg it for others—and say if he ever refused his help to a suffering being.”

The views of Gall respecting God and religion he thus expresses : “Everywhere, and in all times, man, pressed by the feeling of dependence by which he is completely surrounded, is forced to recognize at every instant the limits of his power, and to avow to himself that his fate is in the hands of a Superior Power. Hence the unanimous consent of all people to adore a Supreme Being; hence the ever felt necessity of recurring to Him, of honoring Him, and rendering homage to His superiority.”

The influence of ignorance and prejudice, of envy and pride, of bigotry and dogmatism, are almost omnipotent; and have been repeatedly arrayed in all their magnitude against some of the most splendid discoveries ever made, as well as against the greatest benefactors of the world. The principal agents concerned in these discoveries have suffered all manner of obloquy and reproach—have been branded while living, with epithets the most abusive and opprobrious and have gone to their graves comparatively unknown and unrewarded, leaving it for posterity to vindicate their claims, and do justice to their names. The treatment of Dr. Gall, and the reception of his doctrines, have not differed materially in spirit and character from the history of the discoveries of Galileo, of Tanner, of Harvey, and of Newton. We might enter into a particular statement of facts in confirmation of this remark, did our limits allow.

Hufeland, one of the most scientific men Germany has produced, says of Gall: “It is with great pleasure, and much interest, that I have heard this estimable man himself expound his new doctrine. I am fully convinced that he ought to be regarded as one of the most remarkable phenomena of the eighteenth century, and that his doctrine should be considered as forming one of the boldest and most important steps in the study of the kingdom of nature. One must see and hear him to learn to appreciate a man completely exempt from prejudices, from charlatanism, from

deception, and from metaphysical reveries. Gifted with a rare spirit of observation, with great penetration, and a sound judgment—identified, as it were, with nature—become her confidant from a constant intercourse with her, he has collected, in the kingdom of organized beings, a multitude of signs of phenomena, which nobody had remarked till now, or which had been only superficially observed. He has combined them in an ingenious manner—has discovered the relations which establish analogy between them—has learned their signification, has drawn consequences and established truths, which are so much the more valuable, that being based on experience, they emanate from nature herself. He ascribes his discoveries solely to the circumstances of his giving himself up ingenuously and without reserve to the study of nature, following her in all her gradations, from the simplest results of her productive power to the most perfect.”

Dr. Roget, in the “*Encyclopædia Britannica*,” speaking of the discovery of Harvey on the circulation of the blood, remarks: “On its being made known to the world, it met with the most violent opposition; and so inveterate were the prejudices of the public, that the practice of Harvey was considerably diminished in consequence of his discovery. It was remarked, that no physician who had passed the age of forty would admit the truth of a doctrine so much at variance with all the systems in which he had been educated.”

It has been asserted in the *Edinburgh Review*, as well as elsewhere, that Gall borrowed much of his knowledge from Reil and Loder, two celebrated German anatomists. But it so happened, that the authors of these statements were not aware of the opinions which these very anatomists had previously expressed on this subject. In the sixth volume of Dr. Gall’s large work on the “*Functions of the Brain*,” &c., p. 303, the following extracts are given from a publication by Prof. Bischoff, who was well acquainted with Reil and Loder, “The worthy Reil,” says Prof. Bischoff, “who, as a profound anatomist and a judicious physiologist, stands in no need of my commendation, has declared in rising above all the littleness of egotism, that he found more in the dissections of the brain performed by Dr. Gall, than he had conceived it possible for a man to discover in his whole lifetime.”

“Loder,” continues Prof. Bischoff, “who certainly does not yield the palm to any living anatomist, has expressed the following opinion of the discoveries of Gall, in a letter to my excellent friend, Professor Hufeland: ‘Now that Gall has been at Halle,

and that I have had an opportunity not only of being present at his lectures, but of dissecting along with him, sometimes alone, and sometimes in the presence of Reil, and several other of my acquaintances, nine human brains, and fourteen brains of animals, I consider myself to be qualified, and to have a right to give an opinion regarding his doctrine. The discoveries of Gall in the anatomy of the brain are of the highest importance; and many of them possess such a degree of evidence, that I can not conceive how any one with good eyes can mistake them.' ” After enumerating several discoveries respecting the interior structure of this organ, Loder continues: “These alone would be sufficient to render the name of Gall immortal; they are the most important which have been made in anatomy, since the discovery of the system of the absorbent vessels. The unfolding of the brain is an excellent thing. What have we not to expect from it, as well as to the ulterior discoveries to which it opens the way? I am ashamed and angry with myself for having, like the rest, during thirty years, sliced down hundreds of brains, as we cut a cheese, and for having missed seeing the forest on account of the great number of trees which it contained. But it serves no purpose to distress one's self, and to be ashamed. The better way is to lend an ear to truth, and to learn what we do not know. I acknowledge with Reil, that I have found in Dr. Gall more than I believed is possible for a man to discover in a lifetime.”

The two following testimonials are from individuals who commenced their investigations on phrenology with the strongest prejudices, but probably now understand the science in all its bearings better than any other two men living. They are, therefore, competent judges of the merits of Gall.

Dr. Vimont, a distinguished French anatomist, commenced his labors with the express purpose of refuting the doctrines of Gall and Spurzheim. After immense exertions, he was obliged to declare himself a phrenologist, by means of the very facts which he had collected to subvert the science. It is stated that he had two thousand facts, more than twelve hundred skulls sawn open, wax casts of fifty brains, and three hundred designs drawn out with the greatest accuracy. He worked indefatigably during six years, and expended upwards of twelve thousand francs in procuring specimens. Dr. Vimont, in his large work on Comparative Phrenology, after speaking of the works of Gall, expresses his opinion of him thus: “I saw that I had made acquaintance with a man removed above his fellow men; one of those whom envy

is always eager to thrust aside from the position to which they are called by their genius, and against whom she employs all the weapons of cowardice and hypocrisy. The great qualities which seemed to me to render Gall conspicuous, were extensive cerebral capacity, great penetration, good sense, and varied acquirements. The indifference which I at first had entertained for his writings, was soon converted into a feeling of profound veneration."

Mr. George Combe, in his "System of Phrenology," page 625, pays the following just tribute of respect to the memory of Dr. Gall: "The discoveries of the revolution of the globe, and the circulation of the blood, were splendid displays of genius, interesting and beneficial to mankind; but their results, compared with the consequences which must inevitably follow Dr. Gall's discovery of the functions of the brain, (embracing, as it does, the true theory of the animal, moral and intellectual constitution of man,) sink into relative insignificance. Looking forward to the time when the real and ultimate effects of Dr. Gall's discovery shall be fully recognized, I can not entertain a doubt that posterity will manifest as eager a desire to render honor to his memory, as his contemporaries have shown to treat him with indignity and contempt. Like many other benefactors of mankind, he has died without his merits being acknowledged, or his discoveries rewarded by the great in 'literature and science' of his own age; but he possessed the consciousness of having presented to the world one of the most valuable discoveries that ever graced the annals of philosophy, and enjoyed the delight of having opened up to mankind a career of improvement, physical, moral and intellectual, to which the boldest imagination can at present prescribe no limits. This appears to be the reward which Providence assigns to men eminently gifted with intellectual superiority, and we may presume that it is wisely suited to their nature. A great duty remains for posterity to perform to the memory of Dr. Gall."

JOHN GASPAR SPURZHEIM.

John Gaspar Spurzheim, M. D., a Prussian philosopher, and one of the founders of phrenology, was born at Longwich, Prussia, December, 1776, and died in Boston, Mass., November 10, 1832. The Hon. Andrew Carmichael says: "He was a ripe scholar, a learned author, and a most genial and refined gentleman. He visited Dublin at a time when every mind was poisoned against him by the effusions of the reckless reviewers. I did not myself

escape the infection. It was with difficulty I was persuaded to enter his lecture-room; but, having an abundance of leisure, I thought a few hours would not be much misspent in indulging an idle curiosity, and reaping some little amusement where I could hope but for little information.

"I listened to his first lecture, expecting it to breathe nothing but ignorance, hypocrisy, deceit and empiricism. I found it fraught with learning and inspired by truth; and in place of a hypocrite and empiric, I found a man deeply and earnestly imbued with an unshaken belief in the importance and value of the doctrines he communicated.

"I listened to his second lecture, and I adopted his belief. I was satisfied of the importance and value of those doctrines, and exulted in anticipating those treasures of knowledge, of whose enjoyment the *Edinburgh Review* had well nigh over-reached and swindled me.

"I listened to his third lecture, and perceived with all the force of thorough conviction, that there was nothing of any value in the metaphysics of ancient or modern schools, except so far as they coalesced and amalgamated with the new system. From that hour to the present, I have regarded the science with increasing confidence and unalterable devotion. More certain or more important truths the divine finger has not written in any of the pages of nature, than those which Spurzheim, on this occasion, unfolded to our examination, our study, our admiration.

"He was attended by a large and intelligent class of both sexes, and consequently made many ardent converts to phrenology in Dublin. Indeed, whoever listened attentively to his lectures must, voluntarily or involuntarily, become a disciple. Of the numbers who received his instructions, I have personally known only three who were not convinced of the truth and value of his doctrines.

"In May, 1826, Spurzheim wrote me from his residence, Gower Street, London, 'Here the progress of phrenology is extraordinary. I have lectured at the London Institution to such an audience as never before was brought together by any scientific subject.' He also lectured, with the most triumphant success, at Bath, Bristol, and Hull; and from the last mentioned town continued his journey to Edinburgh, where he arrived, by invitation in January, 1828."

"In 1827, he visited Cambridge, 'and was received' said Chenvix, 'in that seat of exact learning with honors seldom

bestowed before. By the influence of some of the members of that eminent body, the most distinguished for their characters and talents, permission was granted to deliver a course of lectures on phrenology in the botanical lecture-room of the university—a favor never conferred on any who are not members of the establishment. The audience was most respectable, and increased as the course advanced; till toward the close, it amounted to one hundred and thirty, among whom were fifty seven partly professors, partly tutors, and fellows of the different colleges. The attentions paid to Dr. Spurzheim personally, were most gratifying; and the impression made not merely by his method of dissecting the brain, but by his phrenological doctrines, was as complete a refutation of the lame and impotent conclusions of the Edinburgh Reviewer as candor and science could desire.’”

“In 1831–2, Spurzheim delivered courses of lectures on phrenology, and on the anatomy and pathology of the brain, in Dublin and in London. They were attended by distinguished professional men, and they excited deep interest and general admiration. There was an influential movement, though unsuccessful, to have him appointed Professor of Anthropology, in one of the universities of England. The eloquent Andrew Carmichael, of Dublin, says: ‘If this rational, just and honorable step had been taken by any of our universities; if as was confidently expected, the London College had appointed him to the chair of anthropology, the world might still have been in the enjoyment of the useful, enlightened, and invaluable services of the wisest and best of men; and under his auspices society might possibly have gained an advance of half a century or a century in the general progress of improvement.’”

“This opportunity was lost to the college and to science!”

“Spurzheim received pressing invitations to cross the Atlantic. He could not resist so favorable an opportunity of doing good. He assented, and on the 20th of June, 1832, Dr. Spurzheim sailed from Havre and arrived at New York, August 4th. He remained there till the 11th, when he left for New Haven. It was commencement week at Yale College. He was received with great consideration by the faculty of this institution. ‘Indeed,’ the distinguished Prof. Silliman told me, ‘the professors were in love with him.’”

On the 16th August he proceeded to Hartford. The distinguished Dr. A. Brigham accompanied him on his visits to these institutions, and in a letter to me, dated May 22, 1833, Dr.

B. says, "I have many interesting facts respecting Spurzheim's visit to the prison, Insane Retreat, Asylum for the Deaf and Dumb. I presume he did not take so full notes as he would have done had he not expected soon to return here." * * * "The Warden of the prison has repeatedly assured me that Dr. Spurzheim gave the characters of many of the criminals, especially of the noted ones, as correctly as he himself could have done who had long known them."

On the 20th of August he reached Boston. It would be difficult to describe his person and presence. His cordial greeting, his inimitable smile and dignified suavity were irresistibly captivating. He was tall—about six feet in height—and well proportioned, the picture of vigor and good health, and had a countenance beaming with superior intelligence. He was slow and graceful in his walk and without the air of uneducated curiosity; he appeared to see everything that was peculiar or had a meaning.

While always cheerful and sometimes playful, he seldom indulged in remarks even upon trifles without giving instruction. He manifested a deep interest in the schools and public institutions. He was earnest to know about public men, their habits of life and their methods of influence and action. He early became acquainted with Webster, Quincy, Bowditch and other distinguished men of Massachusetts, and it was remarkable to see with what accuracy he could delineate their peculiarities and character.

In discussing with Dr. Tuckerman a sermon both had listened to, Spurzheim remarked, "That was good phrenology." Dr. T. coincided, but feared the preacher did not say enough about the world after death. "Ah!" said Spurzheim, with one of those intelligent and charming smiles for which he was so remarkable, "man did nothing to entitle him to existence in this beautiful world. Teach him to do his best where he is, and leave the future to his Maker. In Him our confidence should know no limits. What the Creator prepares, man can not alter. By trying to understand what is beyond his comprehension, he is very apt to neglect the duties for which he was created. Let him cultivate the faith in the immortality of the soul and practice the requisitions of Jesus Christ, but not impair the sublime results of such a belief and course by narrow speculations."

"On the 17th of September, he commenced a course of eighteen lectures on phrenology, at the Atheneum Hall, Boston, and soon after another course at the University, Cambridge. These lectures

occupied six evenings in the week. He delivered, besides, in the afternoon of every other day, a course of five lectures before the Medical Faculty and other professional gentlemen on the Anatomy of the Brain."

"His lectures in the city were generally an hour and a half long, and at Cambridge two hours. He often remained at the close to answer such questions as were put to him, and many sought an introduction. While he remained in the hall he was surrounded by a crowd of admirers who seemed to lose the faculty of counting time."

"His exertions were more than he could endure." "He presumed upon his powerful constitution before he became accustomed to our climate." "At one of his lectures in Boston—the beautiful lecture on Charity and Mutual Forbearance—while he was diffusing light and warmth among his hearers, he was seen suddenly shivering." "Regardless of the entreaties of his friends he continued fulfilling his engagements. His lectures were nearly finished and he had a most ardent desire to close them before he rested." "The arrangement has been made," said he, "the public will expect me at the stated time, and when I have finished, it will be a relief to know that I can rest without disappointing others."

On the evening of the last lecture, it was very apparent that his illness had increased. At its close it was ascertained that the hall in the Temple could not be had for the next evening, and he wishing to consult the convenience of his audience, asked with one of his benignant smiles, "In what place shall we meet next time?"

He returned to his lodgings never to leave them. He died November 10, 1832.

At a public meeting called on the 11th it was voted: "1. That the arrangement of the funeral obsequies of the deceased, and of the measures proper to be adopted to express a sense of the public loss by the death of Dr. Spurzheim, and the respect entertained by the inhabitants of this city and its vicinity for his talents and virtues, be committed to Josiah Quincy, LL. D., President of Harvard University; Nathaniel Bowditch, LL. D., Joseph Story, LL. D., Joseph Tuckerman, D. D., Charles Follen, J. U. D., Jonathan Barber, M. D., Charles Beck, P. D., William Grigg, M. D., George Bond and Charles P. Curtiss, Esqs.

The funeral took place on November 17th, at Mt. Auburn. A beautiful Italian monument was selected, and it was the first placed at Mt. Auburn. It is marked by his illustrious name alone.

Its entire cost was paid by Hon. William Sturgis, and he was honored by a vote of thanks of the Boston Phrenological Society, and a donation of a bust of Spurzheim and a copy of his works elegantly bound.

Alas! that America's first tribute to her illustrious guest, should be a grave and a monument!

EXTRACTS FROM LETTERS AND TESTIMONIALS, COLLECTED BY THE
HON. A. BOARDMAN, AUTHOR OF A VOLUME ON THE
"DEFENCE OF PHRENOLOGY," PUBLISHED IN 1850.

The selections from the letters from European and American authors are intended fairly to represent the expressed opinions of many other men of equal celebrity.

Testimony of Dr. F. J. V. Bronssais, Professor to the Faculty of Medicine at Paris; Member of the Institute of France; a Commander of the Legion of Honor; author of many physiological and pathological works and treatises.

The celebrated physician-in-chief to the Val-de-Grâce became an early advocate of phrenology, and in 1836, he delivered a course of lectures on the subject, before the Faculty of Medicine in Paris, which were attended by overwhelming throngs. These lectures were reported in the *London Lancet*, and were also published in French by the professor himself. They abound in facts which he himself had observed. In the sixth lecture, he says: "I assure you that it is not needlessly, without reflection and numerous observations, that I have ventured to stand forth in favor of phrenology; I have multiplied observations as far as possible, before taking this step." And in the same year, during a discussion at the Royal Academy of Medicine, he observed: "Many of the details of authors on this, and indeed, on every branch of science, are necessarily imperfect and inaccurate; but such an objection can not invalidate its leading principles and conclusions. These have been deduced from a patient examination of facts, which no reasoning can gainsay, and which most satisfactorily establish this important truth, that certain mental manifestations are always associated with certain cerebral formations. This empiric fact is the foundation of all phrenological reasoning; and notwithstanding the indiscreet and ignorant haste of many disciples of the science, its essential doctrines are based upon incontestable observations.

Testimony of Dr. Robert Machish, Member of the Faculty of Physicians and Surgeons of Glasgow; author of "The Philosophy of Sleep," "The Anatomy of Drunkenness," "An Introduction to Phrenology," &c.

"My first ideas of phrenology were obtained from Dr. Gall himself, whose lectures I attended in Paris, during the year 1825. Before that time I, in common with almost all who are ignorant of the subject, spoke of it with

great contempt and took every opportunity of turning it into ridicule. The discourses of this great man, and various private conversations which I had the honor of holding with him, produced a total change in my ideas, and convinced me that the doctrines he taught, so far from deserving the absurd treatment which they then generally met with were in themselves highly beautiful, as expositions of the human mind in its various phases, and every way worthy of attention. Much reflection, and many appeals to nature, since that period have satisfied me of their perfect truth."

Testimony of G. S. Mackenzie, Bart., F. R. S. L., formerly President of the Physical Class of the Royal Society of Edinburgh; author of "Travels in Iceland," "An Essay on Taste." &c., &c.

"While I was unacquainted with the facts on which it is founded, I scoffed, with many others, at the pretensions of the new philosophy of mind, as promulgated by Dr. Gall, and now known by the term phrenology. On hearing and conversing with this most eminent disciple Spurzheim, the light broke in upon my mind, in consequence of having been disgusted with the utter uselessness and emptiness of what I had listened to in the University of Edinburgh, I became a zealous student of what I now perceive to be truth. During the last twenty years I have lent my humble aid in resisting a torrent of ridicule and abuse, and have lived to see the true philosophy of man establishing itself wherever talent is found capable of estimating its immense value."

Testimony of Andrew Combe, M. D., Fellow of the Royal College of Physicians of Edinburgh; and Physician in Ordinary to their Majesties the King and Queen of the Belgians; author of "The Principles of Physiology Applied to the Preservation of Health," "The Physiology of Digestion," "A Treatise on the Physiological and Moral Management of Infancy," "A Treatise on Mental Derangement," &c.

"Before expressing any opinion on the subject of phrenology as the science of mind, I think it proper to confess that, for nearly two years after I first heard of Dr. Gall's discovery of the physiology of the brain, I not only disbelieved its reality, but treated it with ridicule and contempt. Circumstances, however, then occurred which induced me to examine the doctrines more seriously, and to verify the facts on which they were said to be based. In following this more rational course, the first result at which I arrived was the mortifying conviction of my having been previously entirely ignorant of their real nature and evidences, and employed in ridiculing fancies of my own, which I believed to be phrenology, but which had scarcely any resemblance to it. In proportion as my knowledge advanced and my observations were extended, the impression became the stronger that the leading principles and facts of phrenology were not only demonstrably true, but like all other great truths, fraught with the most important consequences to human improvement, and to the prevention and alleviation of human sufferings; because they were directly applicable to the sciences of medicine, education and morals—including in the latter, civil

and criminal legislation, the regulation of the practical duties of life, the extension of true religion, and everything, in short, in which human nature is concerned, either as the agent or as the object acted upon.

"Sixteen years have now (1836) elapsed since the above conviction became deeply rooted in my mind; and it is worthy of remark that it arose against the influence of prejudice, and against what I then believed to be my worldly interest.

"My whole subsequent experience has confirmed the opinion I then formed of the truth of the new philosophy, and greatly increased my sense of its importance to mankind as constituting, in fact, that science of mind which has been so long, so ardently and, till now, so unsuccessfully sought after by the ablest men of every succeeding age."

From Dr. John Elliotson, F. R. S., President of the Royal Medical and Chirurgical Society; Professor of the Principles and Practice of Medicine and of Clinical Medicine, and Dean of the Faculty in the University of London; Senior Physician in the North London Hospital, &c.

Dr. Elliotson feels convinced of the phrenological being the only sound view of the mind, and of phrenology being as true as founded in fact as the science of astronomy or chemistry. Twenty years have elapsed since his attention was first directed to it, and during the whole period a day has not passed without some portion being devoted to its consideration.

From Dr. Robert Hunter, Professor of Anatomy, &c., in the Andersonian University of Glasgow.

For more than thirteen years I have paid some attention to phrenology, and I beg to state, the more deeply I investigate it the more I am convinced in the truth of the science. I have examined it in connection with the anatomy of the brain, and find it beautifully to harmonize. I have tested the truth of it on numerous individuals whose characters it unfolded with accuracy and precision. For the last ten years I have taught phrenology publicly, in connection with anatomy and physiology, and have no hesitation in stating that, in my opinion, it is a science founded on truth, and capable of being applied to many practical and useful purposes.

From Sir William C. Ellis, M. D., Superintendent of the Lunatic Asylum for the County of Middlesex, at Hanwell; author of "A Treatise on Insanity."

"After many years' experience I am fully convinced the dispositions of men are indicated by the form and size of the brain, and to such an extent as to render it quite possible to distinguish men of desperate and dangerous tendencies from those of good dispositions. I have been the resident physician in this establishment, where we have upwards of six hundred patients, for five years, and for thirteen years previous held a similar position in Yorkshire, where we had two hundred and fifty. If it was necessary I could mention a great variety of cases, in the treatment of which I have found the little knowledge I possess of this interesting science of the

greatest utility, and I am fully persuaded that when it is more known, and acted upon, very great advantages will result to society."

From W. A. F. Browne, Esq., Medical Superintendent of Montrose Lunatic Asylum; author of "Lectures on Insanity;" President of Royal Medical, Royal Physical, Plinian Societies, &c.*

"I hereby certify that I have been acquainted with the principles of phrenology for upwards of ten years; that from proofs based upon physiology and observation, I believe these to be a true exposition of the laws and phenomena of the human mind; that during the whole of the period mentioned, I have acted on these principles, applied them practically in the ordinary concerns of life, in determining and analyzing the characters of all individuals with whom I became acquainted or connected, and that I have derived the greatest benefit from the assistance thus obtained. But although the utility of the science be most apparent in the discrimination of the good from the bad, those of virtuous and intellectual capabilities from the brutal and the imbecile, it is not confined to this. In the exercise of my profession I have been enabled, by the aid of phrenology, to be of essential service in directing the education of the young as a protection against nervous disease, and in removing or alleviating the various forms assumed by insanity in the mature. For several years I have devoted myself to the study of mental diseases and the care of the insane. During my studies at Salpêtrière, Charenton, &c., in Paris, I was able to derive great additional information from my previous knowledge of phrenology; and now that I have been entrusted with a large asylum, I am inclined to attribute any little success that may have attended my efforts to ameliorate the condition of those confided to my charge, to the same cause."

Testimony of George Combe, Esq., author of "A Sytem of Phrenology," "The Constitution of Man Considered in Relation to External Objects," "Moral Philosophy, or The Duty of Man Considered in his Individual, Social and Domestic Capacities," "Notes on the United States of North America," &c.

"When a young man, I paid much attention to the prevailing theories of mental philosophy, frequently meeting a number of friends for the purpose of discussing the opinions of various metaphysical authors, hoping to obtain some practical views of human nature which would be serviceable in my intercourse with society, and in the pursuit of my professional avocations. But all my labors proved fruitless of beneficial results, and I ceased to study the works of the metaphysicians. Hoping to obtain some more satisfactory notions of the mental functions from the physiologists, I attended the lectures of Dr. Barclay. All parts of the body were beautifully described, and their uses clearly explained, till he came to the brain; then all was dark and confused. He took great pains in dissecting that most important organ, but by a wrong method, he cut up into slices like a ham, confessing his ignorance of its functions and intimate structure. The physiologists satisfied me no better than the metaphysicians.

* Dr. Browne was afterwards Commissioner in Lunacy for Scotland.

From the forty-ninth number of the *Edinburgh Review*, I received my first information concerning the doctrines of phrenology. Led astray by the boldness of that piece of criticism, I regarded its doctrines as absurd, and its founders as charlatans. For twelve months ensuing, I paid no attention to the subject. Indeed, such was the unfavorable impression made on my mind by the *Review*, that when Dr. Spurzheim came to Edinburgh, I neglected to attend his first course of lectures, and should probably not have attended them at all but for a fortunate circumstance. Coming out of the Supreme Court one day, my friend Mr. Brownell invited me to attend a dissection of the brain, to be performed in his house, by Dr. Spurzheim. I availed myself of this opportunity of comparing the method of Gall and Spurzheim, with that which I had seen practiced by Dr. Barclay. Dr. Spurzheim did not slice, but began at the medulla oblongata, and gradually unfolded the brain by following its structure. In ten minutes he completely refuted the reviewer's assertions, and finally demonstrated his own anatomical views."

Dr. Abernethy, said: "I see no mode by which we can with propriety admit or reject the assertions of Drs. Gall and Spurzheim, except by pursuing the same course of investigations which they themselves have followed; a task of great labour and difficulty, and one which for various reasons, I should feel great repugnance to undertake."

Testimony of Charles Caldwell, M. D., Professor of the Institutes of Medicine, &c., in the Louisville Medical College, and author of many medical and philosophical works.

This veteran and distinguished professor and author, whose name is familiar to the cultivators of medical science, confesses that he once held phrenology in contempt; and that he allowed himself to be persuaded to attend some of Dr. Spurzheim's lectures in Paris, solely in the expectation of gathering materials for ridicule; but instead, he found materials for earnest thought. From that time, he ceased to jeer, and commenced to investigate. The result appears in the following letter:

NEW YORK, September 18, 1841.

TO ANDREW BOARDMAN, Esq.

DEAR SIR: In reply to your note, permit me to say that I have been an industrious, not to say an ardent student of phrenology for more than twenty years; and that I have pursued the study of it in all the several ways which have appeared to myself and which are considered by others best calculated for the disclosure of truth.

I have studied the science by attentively reading and deliberately examining the writings of men of high standing, who have made it for years a subject of close observation and judicious experiment. I have made it a subject of observation and experiment myself, and from well established facts thus collected, have deduced what I regard as correct conclusions.

Of this severe and long continued scrutiny, the result is, that I believe in the principles of phrenology as firmly and conscientiously as I do in those of any other branch of science with which I am acquainted, mathematics not

excepted. And I further believe that the discoveries of Dr. Gall and his followers, when fully carried out and skilfully applied, in all their details and fitness are destined to bestow on mankind a much higher amount of benefits and blessings than have been conferred by the discoveries and labors of any other man and his followers whom the world has produced.

With sentiments of high regard,

I am, dear sir, very sincerely yours,

CH. CALDWELL.

From J. V. C. Smith, M. D., Editor of the Boston Medical and Surgical Journal,
Professor of Anatomy, &c., Health Officer of the Port of Boston, &c., &c.

BOSTON, October 5, 1841.

DEAR SIR: Formerly I had the honor of holding a chair of General Anatomy and Physiology in a medical college, where it especially devolved upon me to demonstrate the brain. My prejudices against the science of phrenology were so strong that, instead of investigating its claims, as would have become a public teacher, it mortifies me exceedingly to acknowledge that no effort was spared to lessen the dignity of the subject; and, as far as my humble individual influence could be exerted on classes of medical students, I endeavored to prove that the doctrines of phrenology existed, not in nature but in the imaginations only of its advocates. But, sir, subsequent years of observation, during which I have been in favorable circumstances for experimenting, to any extent, have radically changed my views. My own personal investigations have immovably established, in my mind, the great and important truths of phrenology.

Very truly and respectfully yours,

J. V. C. SMITH.

To ANDREW BOARDMAN, M. D.

From John Bell, M. D., Lecturer on the Institutes of Medicine, Medical Jurisprudence and Materia Medica; Fellow of the College of Physicians of Philadelphia; Corresponding Member American Philosophical Society, &c., &c. Author of various medical works, and Editor of the Eclectic Journal of Medicine and American Medical Library.

PHILADELPHIA, November 4, 1841.

ANDREW BOARDMAN, M. D.

DEAR SIR: I cheerfully accede to the wish expressed in your letter of the 30th ultimo, viz.: that I would give my opinion of phrenology, and the grounds of that opinion.

I regard phrenology as the only system of mental philosophy which can be said to indicate, with anything like clearness and precision, man's mixed moral, and intellectual nature, and as the only guide short of revelation, for educating him in harmony with his faculties as a being of power; with his wants as a creature of necessity; and with his duties, as an agent responsible to his Maker, and amenable to the laws declared by the All Wise Providence.

I have been for twenty years an observer, and I may say a student of phrenology, in nearly all its important bearings on man individually, and

man socially considered. I have noted the connection between cerebral organization and mental manifestation, and have never seen marked activity of the latter without corresponding development of the former. Whenever I have met with a powerful reasoner, a man prompt to trace the causation of things, to deduce large and general views from premises previously collected, either by himself or by others, I have found in him the organs of the upper part of the forehead or anterior portion of the cerebrum full. On the other hand, I have not seen any mere collector of knowledge or voluminous recorder of facts and phenomena, and whose intellect was not capable of fashioning these materials into an expressive and harmonious whole, who exhibited well-developed organs of casuality. Genius in a particular department, whether in the fine or useful arts, has presented in the head of its possessor corresponding cerebral developments, as in the organs of form, colour, constructiveness, &c. The fluent speaker, the ready linguist, has always presented to me the organ of language large.

Uniformly I have found a large development of the organs of the propensities in those who are ardent, impetuous, irascibly quick to resent injury, and pugnacious or violent in the mode of manifesting their feelings. Coincidence equally strong has always been noticed by me, between the evidence of the kindlier affections and sentiments of our nature and the developments of a particular region of the brain as indicated by phrenology.

From Amos Dean, Esq., Counselor at Law, Professor of Medical Jurisprudence in the Albany Medical College, author of *The Philosophy of Human Life*, &c.

ALBANY, September 18, 1841.

ANDREW BOARDMAN, M. D.

DEAR SIR: I have received your favor of the 6th inst, in which you request my opinion of phrenology, together with the grounds on which that opinion rests. About ten years since, I had occasion to investigate the science, and to make myself tolerably familiar with its principles. As a science of mind, its simplicity, its method, the satisfactory solution it affords to the complicated action of intellectual and affective faculties in giving a clearer perception of the force and power of motive, and of the nature of will, must commend it to all those who are desirous of seeing psychological phenomena embraced within a beautiful and harmonious system. In the observations I have been enabled to make, I am satisfied that it conforms to nature in all its leading positions. I may say that, as professor of medical jurisprudence, I have had to investigate the subject of insanity, and that without the aid of phrenology I should have been utterly unable to explain, in any satisfactory manner, the great number of well attested facts, fully substantiating many varieties of partial insanity, both intellectual and moral, especially the latter. With the aid of those principles, the morbid exhibitions of mind are brought within the limits of arrangement and classification, and the application of legal rules and principles to their various phases becomes comparatively easy. The great purposes of education, of criminal legislation, and of the application of legal principles to the different varieties of mental alienation, can never, I apprehend, be

fully answered until the doctrines of phrenology are recognized and acted upon.

I am with much regard,

Yours sincerely,

AMOS DEAN.

From Samuel B. Woodward, M. D., Superintendent and Physician to the
Massachusetts State Lunatic Asylum.

STATE LUNATIC HOSPITAL,
WORCESTER, Mass., September 24, 1841.

ANDREW BOARDMAN, M. D.

DEAR SIR: Your letter of the 20th, reached me. In reply, I say that I have felt an interest in phrenology, but am not versed in the science.

So far as my observation has extended in the investigation of the cases of insanity that have come under my care, the principles of the science have been sustained. Where we have found any remarkable development, we have rarely failed to find corresponding manifestations of mind and feelings. In some cases this has been quite remarkable. I am far from believing, however, that insanity is the best state of mind in which to test natural character by these principles. Oftentimes faculties and propensities naturally inactive, and by no means predominant become active under disease. Thus often the insane man is a poet, a wit, a religious devotee, when he has shown no evidence previously that his mind ran in these channels. So also the man of sense, and judgment and genius, is as often dull, timid, irresolute, wants decision of character, and a strong motive to excite him on any subject.

Very respectfully yours,

S. B. WOODWARD.

PROGRESS IN THE TREATMENT OF THE INSANE.*

BY A. M. SHEW, M. D.,
Superintendent of the Hospital for the Insane, Middletown, Conn.

That there has been a large advance in the treatment of the insane during the present century can not be denied. That we have arrived at the best results attainable will hardly be claimed. It will be the aim of this report to show that never before has this work been carried on more quietly, or efficiently, or with more satisfactory results than at the present day. At the last annual meeting of this association the chairman of this committee (Dr. Stearns) furnished us with an exceedingly interesting and instructive report, in which he showed, by quotations from the writings of the first president of this association, and the eminent men of those early days, whose names and memories we fondly cherish, that much of the boasted progress in modern hospital construction, occupation, restraint and personal freedom, was nothing more than the full development of plans and methods which they conceived and were slowly introducing. No unprejudiced mind can study the literature of this subject without being convinced that their views and practices were sound, broad and far-reaching. But, as in all great reformatory movements, the inertia of old customs and the conservatism of ages had to be removed before a hearty support could be relied upon. Even now, after so many years of laborious progress in working out the

*Being a Report read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

details of the problem, we are encouraged by support which, at the most, can only be called lukewarm.

You observe that I concur heartily in all the conclusions of the report to which I have alluded. At the same time I can not shake off the impression made by passing events and the evidence of my own senses. Are there not tangible proofs all about us indicating that now, as never before, hospital workers are reaching out towards changes and improvements; are less satisfied with present results and are striving for something higher and better? It has seemed to me that we are less satisfied with the work of the past; that there is a spirit of honest endeavor to place the whole problem of the care of the insane on a higher plane, based upon scientific principles. How else can we interpret the evidences afforded by the silent but irresistible movements which have resulted in the abandonment of old methods and the adoption of new? The psychological historian looking back upon finished events will, I believe, be able to discern real and substantial progress during the two decades which reach from the end of the war to the present year.

The point gained is not the mere disuse of restraint nor the reform of gross abuses. It is the general recognition of the fact that the treatment and management of the insane is a matter of scientific inquiry and experiment, and, consequently, always and forever, susceptible of improvement. The result has been what might naturally be expected, when men begin to aim at something beyond an old routine. Every year has witnessed some new advance; and, on looking back, it is easy to discern the broad interval between the jail-like structure and the commodious hospital; between the harsh keeper and the courteous attendant; between the discomfort of needless restraint and the enjoyment

of the largest liberty compatible with the end in view.

In thus referring to a well known retrospect it is not my purpose to dwell upon the successive stages of the reformatory movement, but simply to have you bear in mind these prominent facts while we briefly consider what has been accomplished in the treatment of insanity during the past twelve months. If one were to judge from the medical journals, he would fail to find many evidences of progress. It must be confessed that the Medical Superintendents of American Institutions for the Insane are not, as a body, voluminous writers. Rarely do we see anything in published form emanating from their pens, except the annual reports of the institutions which they represent. This tendency to avoid publicity has, I fear, brought upon our honorable body much unjust reproach. In some quarters we are esteemed as of little scientific importance simply because we do not hasten to publish the clinical records of every interesting case. Admitting that we are conservative in this respect, I am not ready to acknowledge that the American superintendent is behind other scientific workers in the practical results of his labors.

A careful study of the reports of all the asylums for the past year reveals a comprehensiveness which is not surpassed in the reports of our English or Continental confrères.

It would be difficult to find in medical literature, or systematic treatises on insanity, the general principles more correctly stated than in the first four pages of the Warren Hospital report for 1884. The Superintendent of the Tennessee Hospital has also condensed our present knowledge of insanity in such a masterly manner that we close his report regretting that he did not say more.

The criticism has been made that hospital reports are not, or should not be, of the nature of scientific papers; that their primary object is to furnish information of the amount and character of the work performed by the institutions they describe. It may be answered that insane hospitals and their operations, together with the facts they accumulate, are agencies on the highest plane of enlightened modern civilization. They not only administer comfort, relief and restoration to the afflicted, but their combined statistics compose a body of knowledge which, it is hoped, may be utilized in future for the cure, treatment and prevention of insanity.

To point out in detail the peculiar merits of each report would necessitate a review requiring more time than I have at my disposal or than you would be willing to accord me in hearing. I will therefore ask your attention briefly to the following topics as discussed in the American reports.

A. Medical Treatment. Under this head: The Influence of Drugs; Stimulants; Exercise of Maniacs; Night Attendants; Training School for Nurses; Female Physicians; Low Death Rate.

B. Moral Treatment. Under this head we may refer to the Influence of Employment; Mechanical Restraint; Seclusion; Summer Retreats; Entertainments.

With regard to the strictly medical treatment of the insane, there does not appear to be much, if any, difference between the American and the English practice. It is not claimed that any special means have been devised for curing insanity as a disease. Dr. Tuke in his notes on "The Insane in the United States" based on observations made at forty asylums, says "I am afraid that we have neither any thing to teach nor learn from each other in the therapeutics of insanity."

Methods of medication have always been fruitful subjects of speculation and experiment. The last annual reports show that we are alive to the importance of testing experimentally all new remedies.

Dr. Sanborn of Maine says:

It has been our aim to bring to bear in our medical treatment, not only the experience of the past in the use of old remedies, but to test the value of new medicinal agents, not discarding all because many are useless. In this endeavor we believe our efforts have not been without benefit, and in the use of a few drugs of recent discovery our expectations have been realized.

Dr. Chase speaks favorably of paraldehyde:

In some cases in which chloral has failed to produce refreshing sleep, this drug has acted efficiently without disagreeable after effects. No alarming symptoms have developed in any of the cases in which it has been administered. We regard it as safer than hyoscyamine.

Dr. Palmer of Kalamazoo writes:

In the treatment of insanity we have no specifics. The tendency at present is not so much to repress morbid activity as to direct it into healthier channels. Good nutritious food, tonics, occupation, amusements, and life in the open-air, constitute the most important aids in treatment.

Dr. Fletcher of the Indiana Hospital reports an interesting case of epilepsy as having been cured by trephining and removing depressed bone, which had been driven upon the brain by a fall from a house-top a year or two before. The relief was experienced as soon as the operation was over.

The Use of Stimulants.—American physicians visiting English asylums are struck by the prominence given to beer in the treatment of the insane. Here alcoholic stimulants have only been prescribed as medicine, while there, beer has a place in the daily diet. Some few English asylums have recently tried the experiment of omitting it from the supplies. So, too, some of us have abolished alcohol from the dispensary

Dr. Fletcher reports:

We would call your attention to the abolition of alcoholic spirits from use in this hospital as a remedial agent. Within the year their use has been gradually lessened until since June last, no spirits, wine or malt liquors have been purchased or prescribed, save the alcohol or wines used in preparing medicines according to the United States Pharmacopœia. Milk has been given without stint to the class of patients that formerly had stimulants, and with marked benefit; and, save in a few cases of dipsomania, the preference was for milk. We believe that spirituous liquors are detrimental to insane people, and it is an undisputed fact, that since its discontinuance the morals of the hospital have improved.

It is pleasing to note that the London, Ontario, Asylum, has had similar experience. Dr. Bucke writes:

During the year just closed no alcohol in any form has been prescribed at this asylum either in sickness or health. This is the second year during which our nine hundred patients have been total abstainers, and I have seen no case in which the administration would be beneficial.

Dr. Curwen says:

With a more liberal and much improved diet, embracing a large amount of meat, vegetables and farinaceous substances, the necessity for stimulants and narcotics gradually disappears under the improved condition created by the food; and thus alcoholic stimulants particularly, have been almost entirely dispensed with.

At Anna, Ill., the use of alcoholic liquors has been greatly reduced, as will be seen by the following table:

The records show that the cost per capita for alcoholic stimulants—

For the year ending September 30, 1878, was	\$1.35
For the year ending September 30, 1879, was	.69
For the year ending September 30, 1880, was	.67
For the year ending September 30, 1881, was	.24
For the year ending September 30, 1882, was	.17
For the year ending September 30, 1883, was	.13
For the year ending September 30, 1884, was	.07

The Superintendent remarks: "No ill effects have followed the reduction of these drugs. They are beneficial in occasional cases among the insane, but we do not consider their use indispensable."

Exercise for Maniacs.—It is well known, that in England the practice is common of employing one or two attendants to walk out of doors for hours at a time with patients suffering from maniacal excitement.

Dr. Finch, of Ohio, seems to have adopted the English practice. He writes:

Our custom here in cases of violent mania is to send them out singly, under charge of a special attendant, in the forenoon and in the afternoon of the day. By keeping up this habit regularly we have in numerous instances demonstrated the usefulness of this practice.

I am persuaded that Dr. Bartlett, of Minnesota, voices more correctly the average sentiment of American superintendents, when he says: "However strong and violent patients may appear while under excitement, exhaustion is the rule, and tonics and nourishing food are required."

Dr. Curwen also truthfully observes:

There is an idea very prevalent that in nervous persons who feel weak and disinclined to exercise, the sovereign specific in such case is exercise. No idea can be more fallacious. All exercise involves loss of nerve power in the sick as well as the healthy, and to expect a person with a weak nervous system to strengthen that system by that which is constantly removing a certain amount of nerve power and force, the very thing they need, is one of those violations of common sense which would not be believed in, were it not so constantly and persistently used and urged on a theory false in every conception and practice. Rest and sleep are in the main indispensable conditions for the recovery of exhausted energy.

Night Attendants.—It has seemed to me, in reading the reports, that progress is being made in the night

care of special classes of the insane. All well-managed hospitals have always employed one or two persons to act as night attendants or watchers; but latterly something more than this has been aimed at.

Now, in addition to the watch people, most hospitals have one or more night nurses of each sex to care for the epileptic, the suicidal, and the untidy. I believe Dr. Godding was one of the first to develop this system, even to the extent of having a special physician for night duty.

In order to test experimentally the advantage of special care, at Middletown, Conn., I set apart one ward of the South Hospital for epileptic males. The arrangement consists of two large dormitories, separated by a hall, where the nurse remains, and seven single rooms. The doors of the dormitories are always open, so that the attendant can hear and respond to any noise or motion. He is thus able to render assistance during epileptic seizures, preventing such accidents as are liable to result from being smothered in the pillows or falling from bed. After a fair trial we extended the same care to the female epileptics, and will soon provide for suicidal patients in the same manner.

For many years at the Mount Hope Retreat, a well organized system of special night nursing has been in operation, composed of the Sisters of Charity.

At the Willard Asylum, special night attendance for the epileptic, suicidal and infirm, and those with filthy habits has been, to a limited extent, introduced during the past year.

At Columbus, special night attendants are employed for the suicidal patients.

Dr. Jane Garver, of Harrisburg, finds additional night nurses useful in assisting patients of uncleanly habits, as well as in caring for the sick.

Dr. Cowles says :

The use of general hospital methods in the care of our patients has produced a variety of results. It is partly due to this that the night service has been considerably enlarged. There are now on regular duty thirteen night nurses, besides two night supervisors, for the purpose, not only of watching the suicidal and very sick cases, but to afford that kind of attention at night which is a comfort to those who suffer from distressing nervous disorders, for some of whom nothing can be done beyond mitigating a condition of hopeless insanity.

At the Southern Illinois Hospital, at Anna, the epileptics sleep in a large dormitory under the eye of a night attendant, where they have constant oversight and care.

At Kankakee a special building called the "Relief" is provided for epileptics, where the best of care and supervision can be given. Dr. Dewey states that "In all, this institution will employ about nine persons for night service."

Female Physicians.—The discussion respecting the influence of uterine disease as a factor in producing insanity, led to a demand for the appointment of female physicians as assistant medical officers in hospitals for the insane.

So far as I am informed, that demand met with the approval of this association and a number of hospitals, six at least, have made the trial during the past five years.

It is, perhaps, not yet time to decide just how much progress has been made by this innovation. That the experiment has resulted in some good is evident. Special attention has been paid under most favorable conditions to uterine affections in their relation to insanity. Dr. Tuke, in the paper heretofore referred to, writes :

Useful then, as this treatment has doubtless been, it is very far indeed from justifying the opinion of those obstetric physicians, who think that if only the Superintendents of asylums would examine and treat the uterine condition of many more patients than they are wont to do, the number relieved or cured would be much greater than it is at the present time.

At the Indiana Hospital for Insane, Dr. Sarah Stockton was appointed an assistant physician on the recommendation of the superintendent. In the annual report Dr. Fletcher observes: "Results have shown the wisdom of that appointment in the general and special improved condition of the female patients under her charge."

Dr. Alice Bennett has superintended the female department of the Norristown hospital for five years, with marked ability and signal success.

I shall have occasion in this paper to make some quotations from the report of Dr. Jane K. Garver of the Harrisburg Hospital.

Dr. Julia Cary is one of the physicians to the Danvers Lunatic Hospital.

The female department of the Philadelphia Hospital is presided over by Dr. Alice Avery.

This question, like all others, may safely be left to the decision of a thorough and practical test. While the experiment will not meet the expectations of its most ardent advocates, it will, I believe, unless beset by greater objections than any which have thus far arisen, become a part of the permanent system of management of hospitals for the insane.

Training School for Attendants.—As an evidence of progress there has been recently established at the McLean Asylum, a training school for nurses similar in design to the training school in connection with general hospitals. The conditions being unlike those of a general hospital, presented difficulties in the way of

organizing a systematic scheme of instruction. Dr. Cowles says in his last report, that during the past "three years the practical work of the nursing service has been done in accordance with these methods supplemented by a course of formal instruction by lectures and class-room recitations. The value of such a school depends upon the thoroughness of its work and its permanency."

Dr. Wardner advises the establishment of training schools for attendants where they could receive full instruction in all the details of their duties.

With a desire to improve and elevate the standard of service in the care of the insane, and to give to the institution under their charge the benefit of a corps of attendants skilled in this special work, the managers of the Buffalo State Asylum have established a training school. The benefits derived both by the attendants and the institution are such that the system is most heartily commended.

Low Death Rate.—In connection with treatment it is quite proper to refer to the death rate in our hospitals. This will depend on circumstances in connection with patients which are changing from year to year, and yet in a series of years, taken together will very nearly correspond with those of any other similar series. It is, however, gratifying to find that the death rate is much less in the American than in the English asylums. This may be partly accounted for by the relative infrequency of general paresis in this country. But even after making this allowance the rate is surprisingly low in many of our hospitals; for instance, at Morganton, N. C., "the deaths during the year were less than four per cent of the whole number under treatment."

At Danville, Penn.,.....	4.06	per cent.
At Elgin, Ill.,.....	4.60	" "
At Auburn, N. Y.,.....	1.00	" "
At Anna, Ill.,	3.99	" "
At Mendota, Wis.,.....	4.00	" "
At Cleveland, Ohio.,.....	4.37	" "
At Dayton, Ohio.,.....	4.68	" "
At Middletown, N. Y.,.....	4.90	" "
At Middletown, Conn.,.....	4.98	" "
At Northampton, Mass.,	4.95	" "
At Columbus, Ohio.,.....	5.00	" "

Moral Treatment.—Thus far I have spoken only of what is included in and relates to the medical treatment of the insane.

In relation to the second point, namely, the moral treatment, the claim that there has been real progress during the past two decades, will not be considered presumptuous. The difference has been not so much in theory as in practice. Our predecessors esteemed employment at its true value, but were apparently less inclined to extend it beyond certain channels. So, too, with regard to amusements, and the question of restraint and seclusion. While admitting the beauty of non-restraint theoretically, they hesitated to assume the responsibility in putting it to a practical test. We will briefly consider the practice of to-day, as shown in the last annual reports.

Employment.—The value of labor, both as a remedial and a financial measure, is strongly insisted on in every report.

Dr. Carriel says:

It is not for the purpose of making money for the State that we are urgent for increased territory; it is to enable the institution to manage its own affairs with convenience, economy and success; it is to give a large number of patients the opportunity for healthful exercise and conduce to the recovery of a mind diseased.

Dr. Bucke, of the London Asylum, attributes the success he has had in the disuse of all forms of restraint, almost entirely to the advances he has lately made in the employment of patients. At the present time, with an average of 880 patients, the average number at work is about 625.

The male patients have been engaged in all the various kinds of farm and garden work; they work with the carpenter, mason, painter, tailor, engineer, baker and butcher; they work in horse and cow stables, do most of the milking; they assist in the dining rooms, kitchen and laundry; they sew, knit, seat chairs, and make mats; they do tinsmith work, blacksmithing, locksmithing, upholstering; all kinds of work on the halls, as bed making, sweeping, scrubbing, sawing wood, shoveling coal, grading land, making roads, feeding and attending 200 pigs, etc., etc.

Dr. Wardner, of Illinois, offers some excellent suggestions respecting the value of employment in the treatment of the insane:

It is a fact recognized by the most common observer, that employment is essential to the well being of both body and mind. A life of habitual idleness, even in the midst of luxurious surroundings is always and everywhere a life of morbid discontent. We all recognize this, and that employment is essential to our welfare both mentally and physically, but this essential condition has been too much overlooked in the care and treatment of the insane.

Dr. Draper writes:

We can safely say that in the past two years we have, more than ever before, made open-air exercise prominent in the treatment of the cases committed to our care. We believe much in its curative, as well as tranquilizing influence. We go even further, and are disposed to regard fresh-air exercise in the treatment of maniacal cases of the sthenic type, as essential as the use of water in the febrile state. It is a natural craving of the patient in both cases, and ought to be indulged and afforded, at least to a judicious amount.

The superintendent of the Western Virginia Asylum observes: "Occupation of body and mind, judiciously directed, is as requisite to the recovery of the insane as it is conducive to the health of the sane."

Dr. Dewey, of the Kankakee Hospital, recommends that the State should authorize a moderate remuneration of patients who labor, and he gives the following reasons: "It is but natural that large numbers of insane persons the very ones, in most asylums, who are most capable of being usefully employed, should refuse to labor for an institution which deprives them of liberty without any reason they can appreciate, and then asks them to labor without reward."

At the Second Minnesota Hospital, no patient is compelled to work, but there is no lack of volunteers. The superintendent says: "Labor contributes to the general health of the patients, makes them more contented and happy, and enables us almost entirely to abandon all mechanical restraint on the men's side."

Dr. Buttolph considers employment as highly important in the treatment of chronic cases, rendering them more healthy, contented and cheerful, while it also holds a high rank as a means of restoring to health curable cases. "The difficult thing is to adapt it to the previous habits, strength and tastes of individuals, so that it will be a pleasure to be sought and enjoyed, rather than a task to be performed unwillingly."

Dr. Chase, of Norristown, has resorted to the quieting influence of out-door labor in cases of excitement and perturbation.

Dr. Bland remarks: "Employment continues to be a leading feature in the treatment of patients."

Dr. Gerhard is a thorough believer in the efficiency of labor. He has opened a shoe-shop, a smith-shop, and a tailor-shop, where all the mending is done and

new work made. As in other hospitals, the principal employments for women are in the laundry, sewing-room, mending-room and ward work.

Dr. Denton, of Texas, writes: "Without employment and out-door recreation, this asylum would be to many of its inmates a gloomy and cheerless prison, who now regard and enjoy it as a pleasant and not unhappy home."

Dr. Earle says: "My opinion of the very great utility of employment has been more and more confirmed by the experience of successive years. For the last fifteen years, nearly or quite three-fourths of all the necessary manual labor upon the premises has been performed by patients."

Mechanical Restraint.—There is perhaps no one topic that has caused so much discussion among alienists as this. Ever since the teachings of Hill and Connolly, men have honestly differed both in practice and precept. The intelligent and humane physician, in the exercise of his high office must, if honest, seem to be conservative. This conservatism has, until recently in America, retarded the adoption of non-restraint methods. Important progress has, however, been made, until now about one-half of all the hospitals for insane are conducted without mechanical restraint, while in others it is only used occasionally.

Non-Restraint.—At the Athens Asylum no mechanical restraint of any kind has been used, "because," the superintendent remarks, "I have seen no instance where, from my experience, I could believe its use necessary or justifiable."

No mechanical restraint is used at any time in the Norristown, Pa., Hospital. In her last report, Dr. Alice Bennett writes: "Mechanical restraint, meaning straight jackets, muffs and the like, is not only

unnecessary, but harmful, and often cruel, in the treatment of the insane. It appeals to the very emotions it assumes to control."

At Harrisburg no mechanical restraint was used on any male patient, and only in a few extreme cases among female patients.

Dr. Denton, of Austin, Texas, reports: "The conclusion which I have reached upon this important subject, after carefully weighing the arguments for and against the use of mechanical restraint is in favor of their restricted and well guarded use."

At the Middletown, Conn., Hospital, mechanical restraint is only used in surgical cases. With a total of one thousand patients it often happens that weeks and months pass without the necessity for its use in a single case.

Dr. Shaw abolished all mechanical apparatus for restraint at the Flatbush, N. Y., Asylum, several years ago, and has not resumed its use.

Dr. Curwen occupies a conservative position as will be seen from his last report:

"Many cases of acute mental disorder are subject to such violent paroxysms, with such inclination to destroy everything within reach, that some means must be used to prevent these things, and on this account it often becomes necessary to place on them some form of restraint to confine the hands until such disposition passes off. The only appliance used for that purpose in this hospital is the connected sleeve made of strong material which could not be easily torn. In these sleeves the hands and arms can be placed and fastened across the body in front so as to prevent any improper use of the hands."

In the last Alabama report Dr. Bryce wrote:

Becoming convinced that the system (the use of mechanical restraint) was wrong in principle and injurious in its results upon both the patients and those who had the care of them, we concluded to abolish it entirely.

I desire now, after a trial of the system two years, to record my unqualified conviction of its great value, and perfect practicality in the management of the insane. I can truly say that there is scarcely a feature of our general management that has not been favorably modified under its influence. Its effect upon the nurses, in making them kind, patient and considerate, and upon the patients in making them trustful, respectful and courteous, is simply marvelous.

At the Willard Asylum it has been virtually abandoned, or rather, it has been superseded by the personal care and attention of attendants.

Dr. Fletcher in his last report of the Indiana Hospital says:

We call especially your attention to the fact that the experiment of non-restraint, commenced more than a year ago, has proven to be a decided success. It is now demonstrated beyond successful contradiction that a hospital for insane can be managed without mechanical restraints, and the good effects from such treatment are incalculable. The patients well understand there are none in use in this hospital, and have no fear of being locked in cribs, or tied to stationary objects. They are more easily managed by having confidence in the kind treatment of the physicians and attendants. The year's experience has taught us that the patients thrive better without restraints, and that fewer patients are injured and less therapeutic restraint is required.

Dr. Wardner, of Illinois, occupies a conservative position respecting the use of mechanical restraint:

I believe in the motto, "*In medio tutissimus ibis*;" abuse may accompany its use, and again its non-use may result in great injury. It should, however, only be used with the utmost care and discrimination, and never without the direction of a medical officer as to the manner of its application.

At the State Asylum for Insane Criminals at Auburn, N. Y., no patient has been subjected to mechanical restraint of any form. Tendencies to violence on the part of patients have greatly diminished since the total and final abolition of mechanical

restraint, two and a half years ago, while that which was known as the refractory ward, under the system of shackles, camisoles, muffs, wristlets, and crib beds, formerly in vogue here, has gradually changed in character, until now it may justly be classed as a "quiet ward," although still occupied by our most troublesome cases.

Dr. MacDonald believes that "the quiet type of lunacy," found in British asylums is a result, rather than a cause, of non-restraint. He sums up the whole subject by saying:

Given suitable attendants, whose sympathies and training are in that direction, any superintendent who will make a fair, thorough and impartial trial of non-restraint in the management of his patients, can not fail to be favorably convinced, even though it be against his will.

Dr. Chapin says:

It has been a frequently repeated experience in the administration of hospitals for the insane, that, coincident with the abolition of mechanical restraint and repressive measures, and the substitution of milder means, and improved personal attendance, and diverting surroundings, decided improvements in the character and condition of the refractory wards have taken place.

In Regard to Seclusion.—At Danvers, seventy-two men and thirty-nine women have been secluded a total of 797 days.

Dr. Goldsmith says: "I believe thoroughly in its advantages as a means of treatment in many cases, and use it rather more while the overcrowding renders the sources of irritation on the ward unusually frequent."

On the other hand Dr. Chase does not permit seclusion at all.

Dr. Gray informed Dr. Tuke that it was never resorted to at Utica.

At the Bloomingdale asylum no patient has been secluded during the past year.

At Athens the amount of seclusion has been very small, frequently less than twenty-four hours during a month.

At Auburn, the daily average amount of seclusion for the year, has been a trifle over one-quarter of one per cent of the average daily population.

Unlocked Wards.—Another element of progress notable within the past few years has been the enlargement of liberty, by the introduction of what is known as the open door or unlocked ward system. I am not able to say just how many hospitals in America have introduced the custom, as the fact is not mentioned in some reports where I know the system is in vogue.

The experiment has been on trial at Middletown, Conn., during the past ten years. There are at the present time 91 patients occupying four cottages, furnished and finished as ordinary dwelling houses. One of these is situated a mile from the Hospital. Care is observed in the selection of patients, and thus far nothing has occurred to detract from the success of the trial.

In the last report of the Buffalo Asylum, Dr. Andrews points out an objection to the system of open wards which I have not seen mentioned elsewhere:

It is possible, he says, in most asylums to have a limited number of open wards, but practice shows that to accomplish this, injustice is often done, as there are some patients who are able to enjoy the benefits of the best ward but whose strong desire to get home becomes so controlling that they can not be trusted. They must, therefore, be kept in the close wards where the classification is not adapted to their condition or progress. This is a practical difficulty which has been found to exist by some who have tried the open-door system.

In view of the consideration here presented, we have not deemed

it wise or prudent to make trial of the unlimited freedom which the open door system contemplates, if honestly and faithfully carried out. We have, however, made use of a system of parole of the grounds in an increased number of cases.

At the Athens Asylum, in Ohio, about 25 per cent of the patients are in unlocked wards, and nearly 33 per cent are allowed to come and go about the grounds, either alone or in company with other patients. It is a common remark that under this system of treatment, which has now been systematically pursued for two years past, the amount of noise and the destruction of property have very markedly diminished.

At Danvers, the number of unlocked wards has been decreased from five to three, chiefly because of the overcrowded condition of the hospital. Dr. Goldsmith says: "I do not consider it a matter of much importance, as the present number easily accommodates all whom I believe to be benefited by that form of treatment."

At Norristown, on the female side of the hospital, five of the sixteen wards are now with open doors and about 80 patients habitually have the freedom of the grounds and the immediately surrounding country. With this increased liberty there has been a marked decrease in the number of attempted escapes.

Summer Retreats.—A comparatively new feature in hospital treatment has been introduced recently in some of the American asylums. I refer to the pleasant custom of furnishing frequent excursions during the summer months, and in a few instances the erection of good houses which can be used as summer resorts.

Dr. Schultz of Danville, Penn., reports that during the past two summers all but five per cent of his 600 patients had enjoyed afternoon picnics in the woods, where the kind of supper usual on such occasions was provided.

At the Wisconsin hospital, the patients have enjoyed one or two steamboat excursions each week, on Lake Mendota, funds being furnished by the patients' friends for that purpose.

At Bloomingdale Asylum nineteen excursion parties, embracing an average of 17 patients, under the care of a physician and several attendants, were made to the farm at White Plains and neighboring beaches, without accident and with manifest advantage to most of the patients. In addition to this, 32 different patients boarded in the country an aggregate period of 156 weeks.

Dr. Stearns in referring to the Walnut Hill farm and house, which had been renovated, says :

I should recommend that this house be still further improved and furnished, and that it be used as a summer resort for some of our patients, after the coming year. Nothing will conduce more in hastening convalescence in some patients than such a change during the summer months. Besides, there are others who are asylum inhabitants for life, and yet are able to highly appreciate such a change as a removal for a few weeks would be from the halls and rooms of the Retreat, to such a home as that can readily be made, and where there could be a larger degree of personal liberty more easily enjoyed.

Dr. Cowles says :

The cottage at the sea-shore in Lynn was a source of much pleasure and benefit to some of our patients. Two ladies spent the whole season of four months there, and nine others had the privilege for a number of weeks. The curative influences of the life there were very marked in some cases.

Dr. Draper reports :

The practical working of this newly created adjunct, as demonstrated by the last year's experience, has been all that we anticipated. We have sixteen rooms furnished singly, and these have all been kept full. A chief attendant and two assistants have proved equal to the charge of this number. No doors are

locked in the day-time, and only such at night as would be considered essential to the ordinary safety of a sane family.

At the Mt. Hope Retreat, the lake and picnic grounds constituted a useful and popular pleasure resort, throughout the summer months. Parties are made up from about two halls at a time, for a day's enjoyment, on some bright summer day, and under the charge of officers, the party moves off early in the morning to the grounds, where, in rowing on the lake, dancing in the pavillion, playing lawn tennis, croquet, etc., they pass the day in unmitigated contentment, and as a crowning joy to the day's pleasure a good supper is served in the open air.

The patients at the Connecticut Hospital, to the number of three hundred, have on three occasions enjoyed excursions to the sea-shore. The trip down the river was made in a large barge fitted for the occasion with awning over the entire deck, and seats to accommodate all. A pleasant sail of three hours to Fenwick Grove at Saybrook, gave good appetites for the "sea-shore" dinner which had been provided.

The report says:

Nothing occurred to mar the pleasure of the occasion. At eleven o'clock all were quietly sleeping in their little beds, and for the third time an excursion unique in character, heretofore considered impracticable, had terminated without cause for alarm, and with only recollections of a most enjoyable summer's day.

Entertainments.—This topic opens up a field so wide and rich in material that I can not enter upon it without adding to my already long communication. Nor is it necessary. Every published report contains evidence of the fact that American alienists are fully aware of the value of amusements and entertainments in the treatment of the insane.

The element of music, social amusements, diversions in the open air, and carefully arranged manual employment are made use of more than ever before. At the same time there is a growing tendency to trust the patients with more liberty, and to remove unnecessary signs of forcible detention. Progress in the near past seems to have been a gradual and steady emancipation from the trammels of old customs. Standing as we do in the very midst of this progressive era, I would say, in conclusion, that the outlook with regard to future progress in the treatment of the insane is very encouraging.

THE CONNECTION BETWEEN INSANITY AND CRIME.*

BY WALTER CHANNING, M. D.,
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Early in the year I wrote to my co-members on this committee, Dr. H. P. Stearns, of Hartford, Connecticut, and Dr. P. L. Murphy, of North Carolina, asking them if they would not aid me in preparing the report. To my request they made a negative reply, and I have been left therefore to prepare it alone.

Several valuable works have appeared during the year in English, German and French, and a mass of valuable papers have appeared in journals devoted to mental and nervous diseases, especially might I mention some in the Italian journals, were it not invidious to do so. Instead, however, of passing these various publications in review, I have taken up one particular branch of our specialty, the medico-legal branch, and this paper will be limited to the consideration of the Connection between Crime and Insanity.

This I have felt it a duty to do partly because of its importance in this country at the present time, and partly because of the appearance of the recent valuable contribution of Mr. Justice Stephen, of the Queen's Bench, on the subject.†

Chapter XIX of the second volume of his work, entitled the "History of the Criminal Law of

* Report of the Committee on the Bibliography of Insanity, read at the meeting of the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

† History of the Criminal Law of England. By Sir James Fitz James Stephen. 3 vols. Vol. II, p. 124.

England," is given up to the consideration of the "Relation of Madness to Crime."

In a little more than eighty pages he most thoroughly and lucidly enunciates his views of the connection between these two conditions, and it is perhaps not too much to say that he is able to make clear some of the legal ideas of insanity more satisfactorily, than any writer that I can now think of.

He leaves some things unsaid, perhaps, and occasionally arrives at conclusions, which hardly seem warranted, but it can not be denied, that in most instances his positions are well taken and skilfully maintained.

I shall give some extracts from his chapter, and endeavor to discover in what particulars a medical man might justifiably differ from him.

In the beginning, Sir James very modestly says that he approaches the discussion of the subject with considerable distrust of his own power of dealing with it satisfactorily, "as it can not be treated fully without a degree of medical knowledge, to which I have no pretensions."

In a foot-note he says he has most frequently referred to the works of Griesinger, (edition of 1867); Bucknill and Tuke, (edition of 1874); and Maudsley, (Pathology of Mind, 1879; Physiology of Mind, 1876; Responsibility in Mental Disease, 1881.) He has read and considered many other works on the subject, but does not consider it necessary to mention them, as they say much the same things in different ways.

A medical man on reading this list of writers that the learned justice refers to will perhaps regret that he does not give a somewhat more extended reference to the writers he has consulted, for while no authorities are higher than those he gives, other writers have

added and filled out the views expressed by them, and some of the wants he has found in the works read by him might be found supplied elsewhere.

Psychological medicine has made very considerable strides within even a period of ten years, and the German school, represented by Krafft-Ebing, Schüle and others, has done a good deal toward systematizing the study of insanity.

Sir James truly says that there has been much excited controversy between the medical and legal professions in which many things have been said which would have been better unsaid.

Cruelty, ignorance, prejudice, and the like, are freely ascribed to the law and to those who administer it, on the grounds that it is said not to keep pace with the discoveries of science, and to deny facts medically ascertained. The heat and vehemence with which such charges are made, makes a perfectly impartial discussion of the whole matter difficult. It is hard for any one not to resent attacks upon a small body, of which he is himself a member; such attacks often being harsh and rude and almost always connected with, if not founded, upon misconceptions. The interest, and possibly the importance of the task is, however, upon a par with its difficulty and it certainly should be said, in extenuation of the violent language, which medical writers frequently use upon this matter, that they are sometimes treated in a court of justice, even by judges, in a manner, which I think they are entitled to resent. Sarcasm and ridicule, are out of place on the bench in almost all conceivable cases, but particularly when they are directed against a gentleman, and a man of science who, under circumstances, which in themselves are often found trying to the coolest nerves, is attempting to state unfamiliar, and in many cases unwelcome doctrines, to which he attaches high importance.

Medical men should thank Sir James for the spirit of fairness he here shows, a spirit often lacking in our own courts. Often the mere manner and plausibility with which an expert opinion is presented are the criterion by which he is judged—a cool, unpretentious

enunciation of medical truths, is often belittled and argued out of sight by an unscrupulous counsel, or carelessly listened to by the court.

Juries are frequently incapable, without any reflection on their education, of appreciating medical expert testimony. They easily catch the prevailing spirit of judicial indifference and listen with a dull ear, and little interest, to perhaps the most important evidence of all.

Sir James proceeds to say :

The different legal authorities upon the subject have been right in holding that the mere existence of madness ought not to be an excuse for crime, unless it produces in fact, one or the other of certain consequences Medical men have contended in substance that every person who suffered in any degree under a disease of which the nature is most obscure, while the symptoms vary infinitely, should be free in all cases from legal punishment.

This statement of the position of medical men sounds almost like an exaggeration, yet undoubtedly is true. It has however an explanation, which is somewhat as follows :

Mental diseases are obscure and at any given moment rarely present all the symptoms which render their diagnosis easily self-evident. If there are one or several indications that insanity exists we are right in assuming that on a sufficient investigation, we shall be able to make the existence of disease certain. Therefore what may seem to a lawyer the slightest degree of mental disease may be to the expert only one indication of deeper trouble, not superficially apparent, but none the less, in existence.

It is a knowledge of this gravity of the disease, which is often externally masked, that leads medical men to think that all insane men should be free from legal punishment.

To read judicial opinions correctly is an art in itself, (Sir James says), to be acquired only by long professional practice, nor can any one begin to do so before he has familiarized himself with several rules well-known to lawyers, but in my experience, altogether unknown to medical men.

If controversy were my object it would be easy to show that hardly any one of the medical critics of the law understands what he criticises, so far even as to be able to quote correctly the authorities on which he relies.

I have no doubt, from a lawyer's point of view, that this is an entirely correct statement.

It is quite what we should expect one profession to say of another, and is equally in accordance with our experience that a legal gentleman rarely interprets medical dogmas, precisely as would a medical man. To the latter, statements and facts laid down in his text-books, have a significance understandable only after years of medical training both elementary and practical.

A technical training may be more necessary to rightly convey the meaning of legal dicta, as many legal phrases and words have peculiar renderings and associations, known only to a legally educated man.

The moral for the medical man to draw is to more carefully revise his acquaintance of matters of law, and still further to keep his own opinions within strictly medical limits. He is only entirely safe when he holds himself to his own province.

Sir James next takes up a very important question, in the present mixed state of medico-legal knowledge, namely, the legal meaning of responsibility. We all of us have an idea of responsibility, but hardly the legal idea.

He quotes a passage from Dr. Maudsley,* the sense of which is that,

* Responsibility in Mental Disease p. 102.

Independently of all law there are conditions of mind called responsibility and irresponsibility; that from insufficient observation the judges have falsely inferred that irresponsibility is a fact, inconsistent with knowledge that a given act is wrong; and that judges habitually trespass on the province of the jury by withdrawing from their consideration the fact, that physicians assert that knowledge that an act is wrong is consistent with irresponsibility.

Apart from the question whether the law is as Dr. Maudsley supposes it to be, all that a judge directing a jury ever does or can understand by responsibility, or irresponsibility is, that the person referred to is or is not *liable** according to the existing law of England to be punished. . . . To allow a physician to give evidence, to show that a man who is legally responsible, is not morally responsible, is admitting evidence, which can have no other effect than to persuade juries to break the law.

Such is the opinion of Mr. Justice Stephen, and it demands our serious attention proceeding as it does from so learned a judge. That he does to a certain degree modify this opinion will be apparent I think further on. He says:

If it is true, as I think it is, that the law of England on this subject is insufficiently expressed, it is no less true that medical knowledge relating to insanity is fragmentary, not well arranged and to say the least, quite as incomplete as the law. . . . If then due importance is not attached by lawyers to the more delicate and obscure forms of disease of the brain, it must be observed that medical men have but recently brought them to light, and are by no means unanimous as to their nature and effect.

Sir James then proceeds to discuss the meaning of the word mind; a sane and insane mind, and in how far, and in what case the fact that a person is insane, relieves him, by the law of England, from responsibility for what would otherwise be a crime, and further how far that law is reasonable.

He would say that the word mind, may be—

* Italics mine.

Used as a general name for all the operations commonly called mental, namely: sensation or feeling, intellect, emotion volition.

Sanity exists when the brain and the nervous system are in such a condition that the mental functions of feeling and knowing, emotion and willing, can be performed in their regular and usual manner. Insanity means a state in which one or more of the above named mental functions is performed in an abnormal manner, or not performed at all by reason of some disease of the brain, or nervous system.

Dr. Bucknill * criticises the above definition of insanity, saying:

It is a medical definition covering the slightest deviation from mental health arising from hysteria or alcohol, from bile or gout. It includes a state of feeling as sensation, which may not affect the mind. It includes abeyance of mental functions which is not insanity; for when the mental functions are not performed at all, there is no insanity.

No good, he thinks, is gained by thus analyzing the mind. He gives a medico-legal definition of insanity, which is an improvement over most of those given elsewhere. "Insanity," he says, "is incapacitating weakness, or derangement of mind, caused by disease."

It will be observed that he leaves out the usual addition of the seat of the disease, namely, the brain. Why he does so, is not clear to my mind. It may be that he thinks insanity may be caused by disease of the nervous system elsewhere than the brain, an idea recently revived. He says the all important term in the definition is the attribute which points to the want of power to do something, and that being the case he may not regard it as necessary to give a more exact medical significance to his definition.

He thinks it useful and scientifically accurate to make a distinction between derangement and weakness. It is

* A Lecture on the Relation of Madness to Crime. By J. C. Bucknill, M. D., F. R. S. Reprinted in the AMERICAN JOURNAL OF INSANITY.

hard for me to follow him here, as strictly speaking, I do not see how any kind of insanity can exist without weakening, impairment, or loss of mental power. Derangement is an old-fashioned word in this country, usually used as a synonym for insanity. If we say a man is deranged, we mean that he is insane. The English use of the word is undoubtedly somewhat different. Thus Worcester says: "*Derangement, alienation and delirium* are all used to denote a less confirmed, or a less violent mental disease than *madness* and *mania*."

If Dr. Bucknill's definition were changed to "incapacitating weakness of mind caused by disease of the brain," it would seem to gain in accuracy rather than to lose. If we use the word disease, it is well to further modify it.

Mr. Justice Stephen, after explaining that the brain and nervous system are the organs by which all mental operations are conducted, goes on to say that he finds great difficulty in discovering in any medical work a definite account of the course of symptoms collectively exhibiting the disease.

Many forms of insanity are referred to, such as total insanity, partial insanity, impulsive insanity, moral insanity, pyromania, kleptomania, "but in the absence of any general account of the whole subject, showing what is the common cause, of which all these symptoms are effects, and how they respectively proceed from it, these expressions are like adjectives connected with an unintelligible substantive."

Again he says he has sought in vain for what appeared on the face of it an accurate picture of insanity, as a real disease. In Griesinger's work on "Mental Pathology and Therapeutics" only did he find the sketch he sought. Griesinger published his second

edition in 1861, it will be remembered, the English translation being issued in 1867.

Since 1861, as I have already intimated, the medical literature of insanity has grown immensely, and many new facts bearing on insanity have been brought to light. Many excellent, systematic treatises have been written; new classifications adopted, and very carefully prepared observations on the pathology, etiology and morbid anatomy of insanity have been published from time to time. Notwithstanding these facts, however, Griesinger is perhaps as good an authority as Sir James could have selected for his purpose.

He sums up what he learns from Griesinger somewhat as follows: Any one or more of numerous causes may produce disease of the brain or nervous system, which interfere more or less with the feelings, the will and the intellect of the persons affected. Commonly the disease if it runs its full course, effects the emotions first, and afterwards the intellect and the will. It may produce either melancholia or mania, the first being much the most common. Both of these forms of insanity "commonly cause delusion, or false opinions, as to existing facts, which suggest themselves to the mind of the sufferer as explanations of his morbid feelings." The delusions are often accompanied by hallucinations.

Melancholia, mania, and the delusions arising from them, often supply powerful motives to do destructive and mischievous acts; and cases occur in which the earnest and passionate desire to do such acts is the first and perhaps the only marked symptom of mental disease. It is probable that in such cases some morbid state of the brain produces a vague craving for relief by some sort of passionate action, the special form of which is determined by accidental circumstances; so that such impulses may differ in their nature and mode of operation from the motive which operate on sane and insane alike.

Insanity affecting the emotions in the form of melancholia and mania is often succeeded by insanity affecting the intellect and will. In this stage of the disease, the characteristic symptom is the existence of permanent incurable delusions commonly called monomania. The existence of any such delusion, indicates disorganization of all the mental power, including not only the power of thinking correctly, but the power of keeping before the mind and applying to particular cases general principles of conduct.

The last stage of insanity is one of utter feebleness. Paralysis and epilepsy are also closely allied to insanity.

Moral insanity is next spoken of, and Dr. Maudsley's account given of it.

The above account may stand for a fair description of insanity from a legal stand-point. The only objection to it seems to be that it sometimes conveys an imperfect idea of the conditions it describes.

We should hardly say that melancholia and mania are emotional states alone, for accompanying them there is intellectual change or impairment as well. Morbid thoughts and ideas are evolved in the earliest stages of melancholia and mania. Delusions, or delusive ideas, are in fact often the earliest indications of mental trouble; the first visible outward manifestations we might say. The intellectual and emotional changes are inter-dependent, developed together. There is no arbitrary line between them, and it is hardly safe to endeavor to separate them for the sake of greater clearness of description, or expression, desirable as it is on legal grounds.

A medical man would hardly say, if he desired to be very accurate, "*melancholia, mania, and the delusions arising from them,*" but rather, *melancholia and mania with their accompanying delusions.* Delusions are characteristic of these forms of insanity. In some cases they are unusually prominent and easily recog-

nized, to be sure, but they may be assumed to exist when not easily recognized.

The mistake made by lawyers seems to be that they regard delusions rather as entities than an integral part of the disease. They do not appreciate the fact that the insane condition is a delusive or false one, the power of perception being disturbed and weakened.

Monomania, from one point of view, though a useful word to us, is misleading to lawyers, for it conveys this same idea, of a single, mistaken idea in one direction, whereas it is much more. It is merely the outward expression of a general functional, or organic disturbance. The feelings, intellect and will are all affected, as in melancholia and mania.

Clouston* has very truly said that "there are very few, if any, examples of a pure monomania—that is of a person who has one single delusion, and that alone. The ordinary form of this type of mental disturbance is for the delusions of the patient to refer to one particular subject, or set of subjects."

Blandford† in his last edition, deprecates the use of the word monomania, and says nothing is gained by employing it, as no two persons attach the same meaning to it.

Sankey‡ (last edition) particularly dislikes the word and says as such a condition does not exist, most writers have agreed to abandon the word.

Krafft-Ebing§ refers to the views of the old German writers that monomania arose primarily from melancholia, or mania, and said that in those cases where such an origin was not found, the history they thought,

* Lectures on Mental Disease, p. 189.

† Insanity and its Treatment, p. 271.

‡ Lectures on Mental Disease.

§ Lehrbuch der Psychiatrie, p. 70 et seq.

was imperfect, as an initial melancholia or mania must have existed.

Snell,* in 1865, described a form of insanity characterized by delusions with hallucinations, but without the self-absorption of melancholia, or the confused idea and severity of mania, and which generally affected the intellect less than the other forms of insanity. He thought monomania a name not ill-adapted for this disease.

Griesinger at a later period, recognized a form of insanity of primary origin. Sander, Schüle, Hertz, Westphal and others have also adopted the same idea. *Primäre Verrücktheit*, is certainly now a well described and clearly recognized form of disease with the Germans.

Spitzka† states that Griesinger formally accepted the doctrines of Snell before his death. He also says that, "To-day the German alienists, by a resolution of their association, stand unanimously committed to the recognition of a primary form of chronic insanity known by them as *Primäre Verrücktheit*, and equivalent to the *monomanie* of the French."

The word *monomania* appears an unfortunate one, possessing as it does, so many different meanings, and if used at all must be used with the greatest caution. I endeavor myself to avoid it; preferring rather to say mania with delusions of a certain nature.

Primäre Verrücktheit is an excellent term in German, but an equivalent should be found for it in our own language. Monomania will hardly be sufficient, unless by common consent we modify, or rearrange our nomenclature.

The time must sometime come when we shall have a

* Insanity, Spitzka, p. 289.

† Insanity, p. 289.

clear, precise and scientific system of classifications of the different forms of insanity. Until such a time, at least in courts of law, it is best to use simple and well recognized names in describing the various kinds of mental disease. Outside of court rooms, the discussion of a classification is to be desired in order that by continual striving we may eventually evolve a uniform system.

Sir James next refers to moral insanity, which he relies on Maudsley to describe, and then says as a summary of what has gone before:

Insanity powerfully affects, or may affect the knowledge by which our actions are guided; the feelings by which our actions are prompted; the will by which our actions are performed, whether the word will is taken to mean volition, or a settled judgment of the reason, acting as a standing control on such actions as relate to it.

The means by which these effects are produced are unnatural feelings; delusions or false opinions as to facts; hallucinations or deceptions of the senses; impulses to particular acts, or classes of acts; and in some cases (it is said) a specific physical inability to recognize the difference between moral good and evil as a motive for doing good and avoiding evil.

Sir James then proceeds to consider how far these conditions may serve as an excuse for crime, and how far the state of law on the subject is reasonable.

In his *Digest* he has stated the law of England as follows:

No act is a crime if the person who does it is at the time when it is done prevented [either by defective mental power or]* by any disease affecting his mind.

(a.) From knowing the nature and quality of his act, or

(b.) From knowing that the act is wrong† [or

(c.) From controlling his own conduct, unless the absence of the power of control has been produced by his own default.]

* The parts enclosed in brackets [] are doubtful.

† Variouslly interpreted as meaning morally wrong and illegal.

But an act may be a crime, although the mind of the person who does it is affected by disease, if such disease does not in fact produce upon his mind one or other of the effects above mentioned in reference to that act.

Sir James speaks of some of the meanings to these terms being clear, but not under certain combinations of facts. The authorities have not satisfactorily settled the matter. Coke mentions the subject of madness only casually. Hale has a chapter on it, which omits the difficulties, and is generally marked by the ignorance of the age in which it was written.

"From the time of Hale to our own no legal writer of authority has discussed this matter on its merits.

. . . the circumstances have never been such as to afford an opportunity for a solemn argument and judgment, laying down the principles of law by which the relation of insanity to crime may be determined."

Apart from some slight exceptions, Sir James says that "every judgment delivered since 1843 has been founded upon an authority which deserves to be described as in many ways doubtful."

The authority to which he refers is that of the answers of the judges to the questions on insane delusions put to them in consequence of the acquittal of McNaghten.

It has been the custom ever since these answers were given for judges to make use of them in charging juries, and Sir James himself has done so on several occasions. He himself, however, in common with some of the most distinguished judges feels that the authority of the answers is questionable, and it appears to him they leave untouched the most difficult questions connected with the subject.

In the first place they do not form a judgment upon definite facts proved by evidence.

In the second place "they leave untouched every state of facts which, though included under the general words of the questions, can nevertheless be distinguished from them by circumstances which the House of Lords did not take into account in framing the questions."

The points on which the law appears to be left in doubt may be reduced to one question: "Is madness to be regarded solely as a case of innocent ignorance or mistake, or is it to be regarded as a disease which may affect the emotions and the will in such a manner that the sufferer ought not to be punished for the acts which it causes him to do?"

After carefully analyzing the answers somewhat in detail, Sir James gives it as his opinion, "that even if the answers given by the judges in *McNaghten's* case are regarded as a binding declaration of the law of England, that law as it stands is, that a man who by reason of mental disease is prevented from controlling his own conduct is not responsible for what he does." He also thinks that the existence of any insane delusion, impulse, or other state which is commonly produced by madness is a fact relevant to the question, whether or not he can control his conduct, and as such may be proved and ought to be left to the jury.

The influence of madness over the will seems to him to admit of classification under two heads. If madness furnishes a strong, yet a controllable temptation to crime it should not be an excuse. A man whose temper was intensely exasperated by suppressed gout would not be excused for any act of violence which he might commit in consequence, and why should he be excused if his general power of self-control remained, if the act of violence was caused by insanity?

There are cases, however, in which self-control is

interfered with, and if this can be proved, the sufferer should be excused.

The man who controls himself refers to distant motives and general principles of conduct, and directs his conduct accordingly. The man who does not control himself is guided by the motives which immediately press upon his attention. If this is so, the power of self-control must mean a power to attend to distant motives and general principles of conduct, and to connect them rationally with the particular act under consideration, and a disease of the brain, which so weakens the sufferer's power as to prevent him from attending or referring to such consideration, or from connecting the general theory with the particular act, deprives him of the power of self-control.

Can it be said that a person so situated knows that his act is wrong? I think not; for how does any one know that any act is wrong except by comparing it with general rules of conduct which forbid it, and if he is unable to appreciate such rules or to apply them to the particular case, how is he to know that what he proposes to do is wrong?

Where madness is proved juries should return one of these verdicts: "Guilty; Guilty, but his power of self-control was diminished by insanity; Not guilty on the ground of insanity."

Sir James justifies the first verdict somewhat as follows: Insanity is a disease, but in many cases it is the sufferer's own fault. Medical works make the connection between insanity and every sort of repulsive vice so clear, that it seems more natural to ask in many cases, if it is not rather a crime in itself than an excuse for the crime it causes. We do not recognize the grossest ignorance, the most wretched education or involuntary association with criminals as an excuse for crime. This should lead to strictness in allowing insanity as any excuse at all in doubtful cases.

It is upon this ground "that the general rule that a person should not be liable to be punished for any act done when he is deprived by disease of the power of

controlling his conduct should be qualified by the words *unless the absence of the power of control has been caused by his own default.*"*

Here Sir James takes the strictly abstract legal view, and I for one can not follow him to the extreme which he reaches. If medical works make the connection between vice and insanity clear in many cases, in a very much larger number of cases they make the absence of this connection equally clear. They show that heredity, want, domestic anxiety or affliction, business cares, over education, unavoidable physical disease, all of these of a perfectly innocent nature, very frequently lead to insanity.

An exactly opposite inference to the one drawn by Sir James would be the more justifiable, and we might say the fact that insanity exists should be presumptive evidence of the alleged criminal's innocence.

Neither have we adequate grounds for reasoning by analogy and saying that insanity which very rarely leads to crime, as a matter of fact, is similar in nature to gross ignorance, wretched education, or involuntary association with criminals. The existence of these conditions *implies* favoring circumstances for the development of crime. Insanity implies nothing of the kind.

Sir James says as to the second verdict:

Reluctance to punish when punishment is needed seems to be to me not benevolence but cowardice, and I think that the proper attitude of mind toward criminals is not long suffering charity, but often enmity; for the object of the criminal law is to overcome evil with evil. But, however this may be, it is impossible to state it more clearly than these passages state it, the position for which lawyers have contended as to insanity. That position is, that parts of the conduct of mad people are not affected by their madness, and that if such parts of their conduct are criminal, they ought to be punished for it.

* Italics mine.

Again Sir James is legal in his view of the subject, as indeed he should be. To me it sounds harsh to say unqualifiedly the only way to overcome evil is with evil.

We get on dangerous grounds as experts when we speak of parts of the conduct of mad people. It seems to me both undesirable and unscientific to separate conduct into parts. A given case should be considered in its entirety and a complete description of all the attributes of conduct be given and passed on.

In relation to the form of *punishment* to be made use of in cases covered by the second verdict, Sir James has some very original ideas, the latter part of which must meet with our approval, however unwilling we may be to agree to the expression of *punishing* of insane persons. He says:

Ought they (the second class) to be punished in all respects like sane people? To this I should certainly answer: Yes, as far as severity goes; no, as far as the manner of punishment goes. The man who, though mad, was found guilty without any qualification of murder, I would hang; but if the jury qualified their verdict in the manner suggested in respect of any offender, I think he should be sentenced if the case were murder, to penal servitude for life, or not less than fourteen years, and in cases not capital to any punishment which might be inflicted on a sane man. As to the manner of executing the sentence, I think there ought to be special asylums, or special wards in the existing asylums, reserved for criminal lunatics, in which they should be treated, not as innocent lunatics are treated, but as criminals, though the discipline might be so arranged as to meet the circumstances of their disorder. . . . The man who is acquitted on the ground of insanity and the man who is convicted, but found to have been under the influence of insanity to some extent, ought, I think, to be separated and submitted to different kinds of discipline.

"In connection with this subject," Sir James says, "I may observe that the principle that madmen ought in

some cases to be punished is proved by the practice of lunatic asylums." *

In a foot-note he says that Dr. Maudsley admits this (Responsibility, p. 129). He (Maudsley) goes so far as to say "abolish capital punishment, and the dispute between lawyers and doctors ceases to be of practical importance." Maudsley says that the punishment of death should never be inflicted on an insane person, but Sir James thinks cases, though rare, might occur as he has above intimated.

As to the verdict of not guilty on the ground of insanity, Sir James says:

It ought to be returned in those cases, in which it is proved that the power of self-control in respect of the particular act is so much weakened that it may be regarded as practically destroyed, either by general weakening of the mental powers, or by morbid excitement, or by delusions which throw the whole mind into disorder, or which are evidence that it has been thrown into disorder by diseases of which they are symptoms, or by impulses which really are irresistible, and not merely unresisted.

To conclude, it appears to Sir James that the line between the departments of law and medicine in this matter is, *theoretically*, and ought to be, *practically* clear.

What the mental elements of responsibility are, is and must be a legal question. It can not be anything else, "for the meaning of responsibility is liability to punishment; and if criminal law does not determine

* Why should this be an argument in favor of punishing lunatics? Punishment is to protect society, and to deter its members from crime, to its own injury. Is there anything in the conduct of insane asylum inmates, who obey rules like a higher order of animals, which would lead us to believe that these ends would be better accomplished, if lunatics as a class were made to undergo penal servitude? Perhaps it did not occur to Sir James that lunatic asylums have to be built and managed in a manner *adapted* to lunatics, otherwise the lunatics could not adapt themselves to these institutions.

who are to be punished under given circumstances, it determines nothing."

These elements, so far as madness is concerned, are knowledge that an act is wrong and power to abstain from doing it, and it is the province of judges to declare and explain this to the jury.

I think it the province of medical men to state for the information of the court such facts as experience has taught them bearing upon the question whether any given form of madness affects, and in what manner and to what extent it affects, either of these elements of responsibility, and I see no reason why, under the law as it stands, this division of labour should not be fully carried out.

If I am wrong in thinking that the power to abstain from a given act is an element of responsibility for it, the duty of the judge is to tell the jury that such is the law and to exclude from the consideration of the jury as being irrelevant, all evidence tending to show that the accused person was deprived by disease of control over his actions.

Sir James next briefly considers moral insanity. Maudsley, Pritchard and Ray describe this form of insanity, which seem to diminish, or destroy those habitual feelings unfortunately called the "moral sense." He would shrink from saying that this form of disease should never excuse crime. It would depend on whether the jury could or could not be convinced that the sufferer in a given case was deprived of the knowledge, or of the power which he regards as the two elements of responsibility by law.

If the morally insane man is as able to abstain from crime as a sane bad man and has the same reason—namely, fear of punishment for abstaining from crime, why should not he be punished if he gives way to crime?

To this question we must answer that we do not believe in the morally insane man. That is we believe that while cases may exist without delusion, strictly

speaking, we feel sure that in any case of apparent moral insanity sufficient intellectual impairment will be found to constitute a true instance of complete insanity. There may be cases of insanity with the immoral elements most prominent, and these to us always correspond to the so-called cases of "moral insanity." Unless something besides depravity exist, we can not call a man insane.

Sir James says finally that:

The impression made on my mind by hearing many, some most distinguished judges sum up to juries in cases of insanity, and by watching juries to whom I have myself summed up on such occasions, is that they care very little for generalities. In my experience they are usually reluctant to convict if they look upon the act itself as upon the whole a mad one, and to acquit if they think it was an ordinary crime. But their decision between madness and crime turn much more upon the particular circumstances of the case; and the common meaning of words, than upon the theories, legal or medical, which are put before them. It is questionable to me whether a more elaborate enquiry would produce more substantial justice.

In what I have written above I have quoted very extensively and said but little myself, which the more commends my report to your consideration. It is my earnest hope that it will lead to a thorough discussion of the difficult and important subject of which it treats.

PARANOIA.

BY HENRY M. HURD, M. D.,

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The term paranoia has been adopted by German alienists to take the place of the much controverted and misleading *Primäre Verrücktheit*, and its use as a substitute for the still more misleading term "primary monomania" in English seems desirable. The differentiation of paranoia from other forms of mental disease must be regarded as a decided advance in the study and classification of mental disorders. The conception of a disorder originating without antecedent excitement or depression serves to explain morbid phenomena which have hitherto puzzled psychologists and cast doubts upon the value of many clinical histories of insanity. It was until recently quite generally supposed that the presence of systematized delusions marked a secondary stage of mental disease. They were thought to be persistent morbid impressions which remained, to use the expression of Krafft-Ebing, like a *precipitate* after the emotional disturbances of the earlier and more active stages of the malady. It has been customary in all such cases to presuppose an antecedent stage of mania or melancholia, and when no history could be obtained of such manifestations, it has been thought that they were very brief, or had not been noticed by the friends. The presence of expansive delusions or of delusions of grandeur following those of a depressive nature, has always proved a stumbling-block. As offering a rational explanation of these conditions, the hypothesis of primary monomania or paranoia must be regarded of great value.

Paranoia is then a form of mental disease which is developed in a defective brain, or at least in one which is congenitally predisposed to take on diseased action. Its essential characteristic is the presence of delusions which arise without any antecedent emotional disturbance and are not elaborated by any intellectual process. It differs from other forms of mental disease by not generally terminating in incoherence or dementia. The patient retains for years the ability to think logically.

In the majority of cases of paranoia brain defects are inherited leading to hysteria, eccentricity, hypochondria and inebriety. If they are not inherited, they are acquired during infantile diseases of the brain like meningeal hyperæmias during the period of dentition, or acute infectious diseases, also from rachitic diseases affecting the development of the brain and skull, or if developed in adult life, it is through injuries to the head, apoplexy, or typhoid fever, with cerebral complications. Paranoia has in most cases a constitutional hereditary foundation, and hence develops as a sequel of trifling and often undiscernible accidental causes or crises of life, like puberty, the climacteric, etc. It is often found that in these persons functional brain derangements, like convulsions at the period of dentition, delirium after fever, anomalies of vaso-motor innervation, and even epileptiform attacks, are easily developed. There is frequently also an asymmetry of the halves of the cranium and an unequal development of the cranial and facial bones. Such persons always possess an abnormal character, often manifesting an increase, decrease or perversion of the sexual feelings; or eccentricities, violent emotions or moral defects, and their insanity represents a hypertrophy of these characteristics.

The causes of paranoia are those of insanity in general, as puberty, change of life, uterine diseases, masturbation, gastro-intestinal affections and fevers. Its development is generally gradual, and the disease often seems the outgrowth of an abnormal personality. Its stage of incubation is characterized by presentiments and suspicions, as opposed to systematized delusions and fixed fancies. The patient makes correct observations of the external world, but combines them with impressions which have their origin in the unconscious intellectual life. He does not know the sources of his false impressions, which are strangely connected together and are brought into relations with himself because they originate within his own mind. He may correct these impressions, but they have an organic basis and reappear again and again in his consciousness. These impressions are not at first delusions, but become so in consequence of some surprising or unforeseen event which renders the previous suspicion a certainty and enter into consciousness during what has been graphically termed "an associating passion," when all power of reason or analysis is gone. How do these delusions originate? Partly through a direct excitation of the ganglia cells of thinking and partly from an excitation of the peripheral nerves, which excites the psycho-sensorial centres without entering into consciousness, and thus awakens delusions or hallucinations. They frequently arise from the formative ideational activity of dream-like states of half-slumber, dreams or delirium. After these primary delusions are developed, secondary ones are formed by reflection, association and remodelling of conscious sensations. This is especially true of hypochondriacal or hysterical persons. Morbid impressions struggling into being give rise to sensations, and these in turn to delusions; and illusions,

hallucinations, perversions of feeling, of sight, taste and smell, help them on. Sometimes delusions arise from an imperative conception, that is, from an idea which, without reflection or emotional disturbance, projects itself into consciousness or obtrudes itself upon the mind. The delusions are connected with an encroachment upon, or an advancement of the patient's standing in the world, and assume the form of ideas of persecution or of exaltation. The former are more common. They may occur consecutively or associated together, or may be isolated. Ideas of persecution generally arise first, and are followed by ideas of exaltation. The ideas of exaltation sometimes logically flow from the ideas of persecution. Why is he persecuted? Because he is the son of a king, or a distinguished personage who must be gotten out of the way. The transformation of the one form into another marks a stage of mental degeneration in which reason and judgment are losing their hold. If insanity commences with ideas of exaltation, a transformation does not usually occur. The prognosis is hopeless after the stage of transformation is reached. The disease does not terminate in apathetic dementia. The persecuted ones, the heroes, gods, etc., of the asylums, remain frequently good tradesmen and skilful workmen until the end of their lives. According to Krafft-Ebing there are two forms of paranoia:

I.—*Paranoia with Delusions of Persecution*.—In this form of disease there are delusions of injury to health, life, honor or property by enemies. Patients of this description are from childhood reserved, easily irritated, distrustful and hypochondriacal. The stage of incubation is long and generally escapes observation. Upon the physical side the clinical symptoms resemble those which spring from an accidental cause like

gastric catarrh, uterine trouble, cerebro-spinal irritation or a hypochondriacal or hysterical neurosis. Upon the psychical side there are false mental impressions leading finally to delusions. The external world is changed in its relations to the patient. Everyone shows ill-will towards him. He is the recipient of annoying attentions. Harmless remarks, casual meetings, coughings and strange looks on the part of those with whom he meets confirm him in his suspicions. His pastor flings sarcasms at him in his sermons; there are heartless hints in the newspapers about him, also placards respecting his character. He believes himself to be censured by the public and called a fool, a blockhead and a bad fellow. He selects innocent words from harmless conversations around him, applies them to himself and perceives mockery in them. The boys in the streets whistle insulting melodies and the very chirping of the birds mocks him. His character is blackened and he is made a scape-goat for others. He becomes shy, irritable and depressed and withdraws from the outside world more and more. The transition from this stage to the height of the disease is sudden and generally brought about by some casual event, as a slight disturbance in health, a fever or a gastritis, sexual excesses or a few sleepless nights, when his delusions become overpowering. Delusions are developed corresponding to his previous domestic or social relations. He is a victim of Jesuits, free-masons, socialists, spiritualists, the secret police, his neighbors, rivals, etc. The deceptions of the senses are the most prominent and assume the character of illusions and hallucinations. Voices are heard from near and far, or from portions of the body in cases of advanced disease. Conscious thoughts are transformed into hallucinations of hearing and sight. These

persons see enemies who divine their thoughts and spy out their actions. They generally distinguish between voices which seem to originate in different places and give them peculiar names. Being audible utterances of the reflective operations of the intellect, the voices reveal the secret plans of the persecutors and announce their names, which are often senseless connections of sounds. There are also false interpretations of general sensations and cutaneous sensibilities. All possible physiological and pathological sensations appear to their minds to be the result of persecution. There are insects or snakes upon the skin and beasts in the body. Persecutors destroy health by poisonous fumes, powders and mysterious machineries. Deceptions of taste and smell are rarer, but they occur. The food tastes of arsenic, chloroform, dirt; and the drink of urine. Everything smells putrid or like burnt feathers. These impressions confirm the patient in the idea that his health and life are threatened. There are two stages in this form of disease. In the first the patient acts upon the defensive and attempts to avoid trouble by closing his windows, stopping up his key-hole, changing his dwelling, cooking his own food, living upon eggs, flying into other countries and changing his name, etc. In the second stage the patient finding the above defensive operations of no avail, comes reluctantly to the conclusion that he must act in self-defense and becomes dangerous. Such persons are apt to commit murder, and this crime is never done secretly, but in the full light of day before witnesses. In some instances they commit crimes so that they may be arrested and taken into court and thus gain an opportunity to show the world their sufferings at the hands of malicious persecutors. From this point the disease goes on to a termination in

mental weakness, unless a transformation of the delusion occurs by which the oppressed and persecuted ones become princes and rulers of the world.

A subdivision of the paranoia of persecution is "The paranoia of querulous and litigious persons." These persons have a mania for going to law and are constantly complaining of the miscarriage of justice.

2.—A second form is Paranoia with Delusions of Exaltation.—These exalted delusions may refer to (I) religious matters, or (II) to erotic fancies.

1.—*Religious Paranoia* is one of the most prominent forms of this disease. In a predisposed person the affection is frequently the progressive development of a distorted and extravagant religious turn of mind and becomes the hypertrophy of an abnormal character. The representatives of this group are frequently weak-minded and by nature unfit to comprehend the spiritual essence of religion and confound it with the formal exterior of religious ceremonies. They egotistically misinterpret the fulfilment of religious commands or fall under the influence of eloquent missionaries or zealous priests, and are excited or perplexed by glowing descriptions of heaven or hell or the sufferings or trials of the Church. Sometimes misfortune drives religious minds into religious extravagances and causes them to lose sight of worldly interests. Occasionally this form of mental disturbance is developed by hystero-ecstatic conditions or epilepsy.

Many patients who at a later period fall into religious paranoia show at the age of puberty a psychic excitement which takes the form of religious inspiration, heavenly visions, or an impulse to enter the priesthood. The stage of incubation may last months or years. Females frequently present the nervous symptoms

which accompany chlorosis, as hysteria and disorders of menstruation. Males are more apt to be hypochondriacal. In both sexes anomalies of sexual impulse are often present and masturbation is frequently practised at an early age. Those who suffer from religious paranoia are often inclined to indolence or revery, they read the Bible and religious works, attend religious meetings and neglect social duties. Among females the sexual irritation, always more common in females of this class at the menstrual epoch, leads to an enthusiasm for priests, saints, etc., which has been aptly called a sort of "spiritual prostitution." The outbreak of the disease is frequently due to some physical weakness brought on by acute disease, sexual excesses, or penitence and fasting. The psychical causes may be unfortunate love affairs, or terrifying sermons. The disease begins with hallucinations and this condition of psychic irritation is accompanied by sleeplessness; sensations of the permeation of the sinful body by the divine spirit come over the individual and transport him from earthly scenes and sorrows. Females frequently have sexual irritations and sensations even of coitus which give rise to the delusion of being the "Mother of God." At first their hallucinations are only visions, in which they see heaven opened, the Mother of God smiling upon them, the wonders of the Apocalypse revealed to them and a supernatural brightness shining about them. Later they hear voices also saying "This is my beloved son," or receive promises or are assured of a prophetic calling. These hallucinations generally are persistent during all the stages of the disease and rendered more active by asceticism, masturbation, etc. A male patient soon forms the delusion that he is a redeemer, a reformer, a preacher in the desert, a soldier of the Lord, etc.; the female that

she is the mother of God, a Virgin Mary, etc. This condition has a receptive stage during which the patient is absorbed in his divine visions, followed by an active stage during which the perfected delusion endeavors to vindicate its right to exist. These reformers, redeemers and Virgin Marys have periods of ecstasy alternating with periods of deepest gloom and spiritual desolation, during which they doubt their divine calling and feel their own sinfulness and need of repentance. The ultimate course of the disease is uniform. Sooner or later the victims of religious paranoia enter the asylums and are sources of discomfort to officers and associates. The termination of this disease is in psychical weakness, rather than in apathetic dementia.

(2.)—*Erotic Paranoia*.—This form is of rarer occurrence. The essential feature of the disease is the delusion of being selected and loved by a person of the opposite sex, generally belonging to a higher class in society. The love of such a person is always romantic and exuberant, but thoroughly Platonic. Such patients have a weak, sentimental disposition, and a dreamy, flabby nature, and early in life create for themselves a feminine ideal over which they become enthusiastic or fall in love with a female, generally older than themselves, whom they have rarely or never seen. In their dreams and waking reveries they elaborate this romance and add to it recollections from their reading and images from dreams. Sooner or later they find in a person of the opposite sex, and generally of a higher social standing, the realization of their ideal. What had formerly been silly, idle dreaming, now becomes actual disease. They find encouragement in the glances and attitudes of the object of their adoration, and misinterpret the most harmless occurrences. Soon they enter into hallucinatory relations with her and have

illusions. At this stage delusions of personal exaltation frequently develop by which all differences in rank between them and their idol are easily adjusted. At last they commit some overt act in consequence of delusions, and are sent to asylums.*

From the above it will be seen that paranoia differs from acute mania by an absence of excitement, or loss of self-control in the earlier stages. The patient is distressed and unhappy because he is vaguely troubled about some phenomena which he can not satisfactorily explain to himself. These feelings weigh upon him like an incubus, and are turned over in the mind more or less constantly. In many instances I am positive that the morbid impressions at first are not persistent, but recur and reappear whenever the patient's vitality is below par, or when for any reason a special draft is made upon the vital forces. In my experience there are seldom any symptoms suggesting an attack of acute mania. For this reason I am unable to see how the condition in any of its stages can be properly classed as chronic mania. Chronic mania is simply an acute mania which has assumed a chronic form. In many instances the victim of chronic mania suffers from persistent mental disorder of a violent type, without predominant delusions. There is simply noisy incoherence and a condition which may be appropriately termed a confirmed stage of acute mania. In other instances there may be chronic maniacal excitement, with a predominant delusion. But these delusions are not as carefully systematized, nor do they take hold of the whole intellectual life as deeply or profoundly as the delusions of paranoia. Paranoia is easily distinguished from melancholia by the different relations

* The above description of paranoia is summarized and condensed from Krafft-Ebing's *Lehrbuch der Psychiatrie*, 2d ed.

of the patient to the surrounding world. The melancholic patient believes himself to be justly despised and suffering merited abuse. He is unworthy to receive or to enjoy the commonest comforts. The victim of paranoia, on the contrary, believes that the disrespect and unkindness of his associates are not merited. He is right; they are wrong. He is unjustly accused and aspersed, and he comforts himself with the feeling that sooner or later he will take vengeance upon his enemies, and will show to the world the triumph of right and justice over wrong.

Paranoia differs from chronic dementia in the fact that the mental vigor does not seem to be lost. The patient is able to reason correctly from his premises, to carry on connected, consistent conversations, to engage in occupations which require a good degree of mental force. It may, like all other forms of mental disease, eventually terminate in mental enfeeblement, but dementia is not a prominent characteristic. It differs from paresis in the fact that the delusions of grandeur are consequent upon delusions of persecution, and often intermingled with them. There is also an absence of motor and sensory disturbances which are pathognomonic of paresis. It is in short, a primary condition, developing without antecedent excitement or depression—using these terms in the senses of acute excitement and prolonged and persistent depression. It does not terminate in dementia, and the process of logical thought is in the majority of instances left intact. It is not exclusively a disease developing among the Germans. I can now recall four cases of paranoia which were of American birth, and two were known to be of American parentage, and of families which had lived in America for many generations.

RECOVERY OF THE CHRONIC INSANE.*

BY P. M. WISE, M. D.,

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The transition of the curable insane condition to those secondary states known as chronic, or popularly incurable, is gradual, and can not be foretold. The asylums' experience of many years has approximately fixed the average proportion of recoveries within certain periods, and it has thus been shown that proportionately few recoveries are made after two years' duration of insanity. Esquirol's estimate that one in thirty recover after three years' duration is not supported by modern asylum experience. In considering the question of curability the duration of the insanity is only second in importance to its nature. Epileptic dementia, paralytic dementia, and, in brief, all secondary forms of mental weakness are considered incurable; and chronic mania, *Verrücktheit*, the stationary disorder that follows an acute stage, or the primary conditions that have no acute stage, and that continue without relief for several years, are as little susceptible of cure. But that there are indubitable indications of incurability in the chronic insane short of advanced dementia, the anomalous cases that are occasionally met with must refute. Recoveries, however, that occur after the existence of insanity for a number of years, in those forms that are generally recognized as incurable, are quite exceptional, and deserve especial notice. In his repertoire of unusual cases, each asylum physician has a greater or less number of remarkable cures, and it is these inexplicable recoveries that creates conservatism in his prognosis. It

* Abstract of a paper read before the Willard Asylum Medical Association.

is certainly not safe to predict incurability in any case where secondary weakness has not progressed to impotency. Those who observe the chronic insane occasionally see an apathetic dement gradually emerge from an apparently extreme degree of mental decay, and under favoring conditions regain many psychical functions thought to have been lost, and an interest in their environment and the external world. Where the insane state is complicated by hysteria or other functional neuroses, and where the mental feebleness does not progress, there may always be a hope of ultimate recovery. Examples of recovery following some great moral or physical shock are related, where the change has been sudden, almost instantaneous. Usually, in instances where the insanity has been of several years' duration, the changes are gradual, and are thus indicative of less danger from relapse.

In the following cases cited it is not intended to include that class of the demented in whose history brief periods are noted, associated usually with an exaltation, when the deadened faculties and desires are re-awakened, re-animated, and exhibit a treasury of reminiscence and a power of reasoning apparently incompatible with an organized fatuity, and which passes into oblivion with as little cause or expectation as it came. Such instances are not infrequent, but they cause a surprise at each recurrence that material pathology does not allay. It is inexplicable how an intellectual shadow that has existed for years can be cleared away in a few short weeks; how a mind with manifestations invariably associated with changes of tissue affecting the operation of the mental processes can regain normal function with apparent completeness even for an instant. Where in the realm of pathology can an analogy be found?

CASE I.—W. H. had the fifth attack of mania at the age of forty. The first four attacks were each of a few weeks' duration. The fifth he did not recover from, but passed into a condition of chronic mania with delusions that he possessed exalted rank, and in this condition, after two years of insanity, he was admitted to the asylum. He presented the usual picture of chronic mania, with some weakening of the mental faculties. If not addressed by high sounding titles, and if his scrawls purporting to be pictures were not praised, he became irritable, and sometimes violent. He gradually failed, and became oblivious to former beloved associations. His previous interesting life was a blank to him. He was very incoherent. His dementia was progressive, and was supposed to be terminal. A certificate of his permanent disability was confidently made, and his friends had consigned him to the roll of the lost. But, alas, for the positiveness of human insight weighed against fortuity. Seven years after admission, and nine years after the commencement of the attack, without an hour's intervening lucidity, he lost his delusions and regained his coherence within one week. At this writing, about three months later, he seems to have recovered very nearly, if not wholly, his reasoning powers and his normal mental strength. Should he as suddenly return to alienation as he recovered from it, it would in no wise detract from the wonder such cases invariably excite.

Probably the largest number of recoveries of the chronic insane can be traced to some crisis precipitated by some fortuitous circumstance, or by ordinary physical diseases. Our records show that typhoid fever especially has had a favorable influence on the course of the insanity. The following examples are selected as representative:

CASE II.—A. B., female, aged 28, widow, who inherited an insane diathesis from maternal antecedents, became depressed and suicidal, and then lapsed into a chronic state of exaltation with mild delusions. She remained in this condition two years with little change, except an increasing mental weakness when she became actively maniacal, and was admitted to the asylum. She again became composed but was more confused, her dementia had increased, and she was occasionally filthy, apparently as a result of her mental weakness. Seven months

after admission she developed typhoid fever, and convalescence found her free from delusions and rational. She made a good recovery.

CASE III.—E. S., female, unmarried, had an attack of acute mania, and was committed to a State hospital. After two years' treatment she was transferred to the asylum as a chronic case. She presented all the features of chronic mania with paroxysmal excitement of a noisy and violent nature. Her bodily strength was good. For one year after her transfer her condition was unchanged except by a gradual increase of mental weakness. She was then prostrated by typhoid fever, which ran its usual course to recovery. Following it the patient was free from excitement and her mental strength improved. Three months later she was discharged recovered, and has remained well.

CASE IV.—W. B., male, aged 22, marked maternal heredity, had delusions of an exalted character for rather more than a year, when he had a violent maniacal attack, and was admitted to the asylum. He became more composed, and a month after admission developed typhoid fever. His delirium was marked, and recovery from the fever found his delusions dissipated. He was soon afterwards discharged recovered, and has remained well.

The popular notion that the climacteric period exerts a favorable influence on the mental condition of the insane is chiefly traditional, but there is no doubt that occasional instances of recovery in the chronic insane do occur at this period, in which there is no other assignable cause for the change. Improvement is exceptionally noted at the climacteric, but it is chiefly a change from the active and distressing delusions of chronic mania to the calm of dementia. The following case is anomalous, and is not a representative one:

CASE V.—E. D., unmarried, aged 30, with no history of predisposition by inheritance; parents living and well. Without assignable cause she had an attack of acute mania, and was committed to a State hospital, where she improved, but did not

recover, and three years later was transferred to the asylum. Her condition was one of violent and destructive mania. She was profane and obscene, and was one of the chief disturbing elements in a disturbed ward for two and a half years. Her menstrual function was then retarded and she began to improve. The cessation of the menses in several months marked a rapid improvement, and in four months she was discharged recovered. Two years later she remained well. Duration of insanity five and one-half years.

The cases following represent a larger class of the chronic insane that furnish a history of quiet dementia existing a number of years, or, in others in whom mental aberration comes on gradually and is progressive or stationary for several years when an explosion of maniacal excitement is followed by melancholia and gradual recovery, or the subsidence of the active condition leaves the patient on the path to improvement or recovery.

CASE VI.—C. H., male, aged 29, was removed to the asylum from a State hospital as an incurable paralytic dement of more than two years' duration. For some time after his admission to the asylum his mental condition was uniformly dull and his habits were filthy. He could not answer responsively and appeared unable to attend to his ordinary physical wants. Several months later he had an attack of maniacal excitement when he became very active in his movements with violent tendencies. Upon the subsidence of this activity he commenced to improve and made a good recovery in six months.

CASE VII.—R. M., female, aged 26, married eleven years, only child 10 years of age, manifested mild delusions and progressively the usual symptoms of chronic mania for two years, and then a stationary condition supervened lasting a year. She was declared a chronic case in an expert consultation and not likely to improve under hospital treatment, and she was cared for at home. An explosion of mania required her removal from home, and she was admitted to the asylum in a condition of acute mania which continued three weeks, when she became correspond-

ingly depressed and suicidal. She gradually improved and made a permanent recovery in six months after admission.

Occasionally an unusual incident in the life of a terminal dement will change the character of the case and modify the prognosis.

CASE VIII.—C. R., aged 28, transferred to the asylum from a State hospital. Insanity is of the exalted delusional type. He is also somewhat demented and his answers are not always responsive. Is easily irritated and makes sudden assaults. During the following three years he was classed as a case of chronic mania, lapsing into dementia. His incoherence became marked and all his mental faculties were weakened. He then wandered away from his attendants while out of doors and when he was followed he became much disturbed under the influence of a delusion that the attendants were enveloping him in sulphur fumes. He improved gradually from this time forth and was soon permitted abroad on parole, and was discharged recovered three years and three months after admission, and five years after the commencement of insanity.

The familiar spectacle of a crisis precipitated by a suicidal attempt is rarely seen in the chronic insane. Among recent cases of melancholia the change toward recovery following serious attempts at self-destruction is sometimes surprisingly rapid. The following case was not looked upon as a favorable one, but the period of insanity did not bring him without the period assigned to curable insanity.

CASE IX.—J. M., boy, 16 years of age. Insanity first detected at inauguration of pubescent period and his condition had been growing worse for a year when he was admitted to the asylum. He had exalted delusions, but within a month became depressed and suicidal. Two months after admission he was found suspended from a bedstead and nearly asphyxiated. This appeared to be the crisis of his alienation and thenceforward he improved rapidly and recovered.

The following interesting case demonstrates how

a grave disease of the nervous system complicating the insane state and existing for a period of time supposed to confirm the morbid condition, may depend on removable causes.

CASE X.—S. H., married woman, at age of 48 years, had a second operation for removal of a nasal polypus, which was followed by epileptic convulsions. She soon manifested symptoms of mental decay that progressed gradually for about two years, having convulsions in the meantime about twice weekly. She then had an attack of maniacal excitement, and was admitted to the asylum suffering from very active delusions of an apprehensive nature. She was also confused, incoherent and had periods when she would destroy all articles of furniture within her reach. For seven days after admission she took food sparingly, and was then fed by nasal tube with some difficulty as there appeared to be an obstruction in the nares, ascribed at the time to the growth of a new polypus. She was fed for twelve days when she voluntarily took food and her improvement from that time was rapid, although twenty days later she had a severe epileptoid convulsion lasting several minutes. This was the last convulsion detected previous to her discharge three months later in her normal mental condition. She stated that the passage of the tube through her nose, although painful at first, relieved her from the sensation that something was "pressing on her brain," a sensation she had experienced since she first had nasal polypus; that her head was clearer and felt entirely easy for the first time in years. A year later she was reported as continuing well, and free from convulsions. The only reasonable explanation of this phenomenal case is, that the nervous centres were implicated by a naso-pharyngeal polypus that had, probably, a second attachment and was only partially removed at the operations. The continued friction of the nasal tube in feeding the patient effected an absorption or permanent removal of the growth with relief of all symptoms.

The advantages of diversion of the insane mind as a means of treatment is shown constantly in the wards of asylums. Anything that will change the routine and break the continuity of the morbid mental processes is worthy of trial.

CASE XI.—H. H., single female aged 35, transferred from a State hospital, where she had been resident for two years, to the asylum as a case of secondary dementia. She was very dull and could not answer the simplest questions intelligently. Her habits were uncleanly, physical condition fair. She improved from the date of her admission and recovered her full mental strength. She was insane three years.

The above is a fair instance of improvement due wholly to change of environment. At least there was no special treatment directed towards her recovery. Instances are recorded of removal of long standing cases of chronic insanity that have recovered after being removed from the asylum to the more varied life in their homes.

CASE XII.—M. M., unmarried female, admitted to the asylum at age of 21. She was transferred from a State hospital, where she had been committed a year before in a condition of acute mania. It appeared that she had passed through a typical course of mania without recovery, and when admitted to the asylum she was recorded as a case of dementia. The mental dullness was of that unmistakable character that marks secondary degenerative changes. For one and one-half years following her admission her dementia was gradually progressive. Her bodily functions were normal. At this time she received quite a severe assault from an associate patient, and was removed to another ward, where, it was noticed, she began to improve, and special effort was made to induce her to work. From this time forth there was a slow but progressive improvement. She was discharged one year later—three years after admission—fully restored to her normal mental condition.

CASE XIII.—M. G., female; inherited a neurotic diathesis from both parents. Remained well until the age of 29, when she sustained a severe mental shock in the death of a beloved sister and her nearest friend. She became melancholy and delusional, and later became excitable and destructive. She continued in this condition for fifteen years, when she was admitted to the asylum. She was then laboring under fixed delusions of a spiritual character. She had communications with spirits, hallucination of hearing and

feeling, and had an undefinable apprehension of men. If touched by one would experience a revulsion that would be manifested by great tremulousness, and sometimes, vertigo. Her acuteness of perception, so marked in early life, was dulled, and she appeared on the road to terminal dementia. She could not be induced to interest herself in her surroundings in any way. She confined herself to her room when permitted, and would pass the time walking up or down or looking out of the window. She could not be induced to take medicine, on the ground that she did not require material remedies. She was anæmic and of spare habit.

There was no improvement in her mental condition for three years. Her mind had weakened, and she was but little observant of her environment. She would usually answer responsively, but her statements were all modified by her delusions. At this time a cabinet organ was introduced on the ward, and with considerable difficulty she was led to play upon it, and soon became attached to it. Thenceforth she made rapid improvement, and within the following year was discharged recovered. For more than a year she has occupied a position as church organist and music teacher, and her mind has resumed the activity and balance that were lost by the psychical disaster more than nineteen years ago.

Probably no class of the insane presents the changeable symptoms and difficulty of prognosis as that in which the hysterical element is predominant. It is a matter frequently of great difficulty to differentiate the purely functional neurosis from the graver components of the alienation, and where true dementia does not exist the case can not be looked upon as wholly devoid of hope. The following case is an instance of the persistence and final cure of an extreme case.

CASE XIV.—F. B., married female, strong paternal heredity. Insanity commenced at age of 32, after a miscarriage. She became morose, irritable, violent and obscene and would strike her own head and punish herself severely. She continued more or less disturbed, without lucid intervals, for a period of eleven years when she was informed that she would be taken to an asylum, when she took to her bed and refused to sit up or walk. She was admitted to the asylum four years later (first admission) when she

still refused to walk or sit upright, although she had good use of her limbs and could kick with considerable force. She was noisy and garrulous, talking incoherently and loudly, and was very emotional. Pulse rapid and soft and limbs emaciated and flabby from lack of use. One year after admission to the asylum she still refused to walk before witnesses, although she would creep about the floor. Her general health had much improved; she remained quite irritable and emotional and suffered from delusions of persecution. Treatment was moral and directed to improvement in strength. She was taken a short walk up and down the ward regularly by the aid of two attendants. It was a mere semblance of a walk as the patient did not use her limbs, but the practice was not abandoned although the results were negative for some months. She gradually improved however and began to walk voluntarily. Three years after admission she was so far improved as to be discharged. She remained morbidly emotional. A subsequent report of her condition was satisfactory and she continued comfortable. The duration of her insanity was seventeen years.

There are pathological questions that arise in the consideration of the foregoing instances, that are not to be met in ordinary recoveries from the insane state. In the light of recent physiological research it is difficult to conceive of any prolonged change of function without corresponding nutritive change, and of constant disturbance of nutrition without structural alteration. As a result of terminal insanity, or the structural ravages that lead to it, we expect to find degenerated cells, interstitial atrophy and enlarged perivascular spaces, miliary aneurisms, dilatations, atheroma, etc. Can such changes, indicated by the form and duration of the mental derangement in the foregoing cases, have existed and yet permit a restoration of function presumably dependent upon a healthy condition of the cortex and its outlets? Can it be consistently maintained that the restoration of obviously healthy mental action is compatible with co-existing structural degeneration? Or, if we grant the

possibility of a morbid change in mental function without a corresponding change in nervous matter, can we reconcile the inhibition of the reasoning faculties for years to any hypothesis short of physical degeneration?

In Case I, the patient's resumption of a natural state after years of mental deficiency could not have represented a corresponding restoration from structural degeneration, and yet, there was apparently nothing to distinguish his from other cases that present a marked pathology of the nervous centres. If the shadowing of intellect is persistent and maintained for years without the presence of grave tissue changes involving the cortical cells, then we can not confidently assume that psychical action depends upon physical conditions. But may we hold that healthy structure can replace degenerative so rapidly that mental obscuration existing for seven, fifteen or nineteen years can be swept away in a few short weeks. Is not such an assumption antagonistic to the better known pathology of the lower nervous centres?

The recovery of long standing cases of insanity has always been considered curious rather than representative. Such cases are so exceptional that they can not have much weight in determining or controverting any pathology of insanity. If it were possible not to lose sight of the individuality of the patient in the system of classification so common in asylums, and more or less necessarily so, it might result in detecting the essential differences of condition in those who recover and those who do not. The application of rule to the duration of insanity in its relation to curability is so little applicable to individual patients that it should be avoided altogether. The conditions for recovery lie without our ken quite as often as other-

wise in the larger proportion of insane patients. We know as a result of experience that a healthy state of nutrition of all the organs, and particularly of the brain, conduces to restore the mental balance, and in a manner that can be understood in the light of modern psychological physiology. But do we not as often witness failures where all symptomatic evidences indicate a return of all the physical functions to a standard of health? Moral efforts directed to the diversion of patients succeed and as often do not, where the nature of the psychical disturbance seems identical, and where antecedent conditions would lead us to expect equal results. The instances where concussion or sudden shock has proved a starting point to a recovery that had been wholly unexpected, establish no value in the treatment of identical cases. Were it so, sudden shock or assaults might become a routine of moral treatment. We can not believe otherwise than that in Case XIII, the cabinet organ incidentally brought within her reach was the key that opened the imprisoned intellect and gave it freedom. It may be argued that she had been preparing for the improved change, but the writer, who was the observer, feels that he is not mistaken when he states that the attraction of musical sounds was the only element that would have drawn her from her delusional existence whatever might have been her physical condition.

Psychical pathology remains a comparatively unknown field, and there are none of its problems more enigmatical than those under consideration. We may conceive how a brain may subserve to the display of functions that are contradictory, but how all the mental faculties can be in abeyance and obscured for a period of years, and then be restored to a normal condition, is beyond our conception.

The study of the cases reported teaches the value of persistent treatment of the mental condition. Every doubtful case should be subjected to the closest scrutiny, and the motives that impel the insane acts may frequently, when discovered, lead to indications for treatment. Any change of scene or action that will occupy the weakened mind to the exclusion of morbid mental action, almost invariably results in good. The scene has become so familiar to us that it is no longer a matter for surprise to see the listless demented brighten up and re-awaken an interest in their surroundings when subjected to the exhilarating music and motion of the dance. The effect is often fleeting, but it is occasionally permanent, and the good results that accompany this pleasant diversion should give it a prominent place in the psychiatrist's armamentarium.

Accidental shock of various kind has been followed by changes of mental condition favorable and unfavorable. In the chronic insane, however, it must be remembered that an unfavorable change does not alter the prognosis, while the opposite may be the starting point to a recovery that would not have occurred had there been no departure from the routine of institutional life. I remember distinctly a case under my observation in the earliest days of the use of hyosecyamine in this asylum when a dose of it was administered to a patient who had frequent outbursts of destructive excitement. The quantity prescribed was increased by mistake and the patient was prostrated for many hours, and was supposed at one time to be critically poisoned. After recovering from the stupor she was quiet and her habits gradually improved. She became industrious and was very seldom destructive. There was a complete change in her condition.

In the case of Mrs. W., we have an instance of return of mental balance following surgical shock at two different times, and the mental state at the separate occurrences was diametrically opposite. The first accident—a fracture of the left femur—took place during a period of extreme exaltation. On the second occasion—fracture of the right femur—she was correspondingly depressed and had been suicidal for months. On both occasions composure and apparent recovery followed the accident. With the reasonable assurance established by these incidents, that recovery from the insane state will follow such casualties would it be humane, in case of her relapse, to create an artificial or pseudo-accident that would require similar surgical conditions?

CLINICAL CASES.

THREE CASES OF INSANITY TREATED BY REMOVAL OF DEPRESSED BONE.

BY W. B. FLETCHER, M. D.,

Superintendent of the Indiana Hospital for the Insane, Indianapolis, Ind.

CASE I.—W. P. H., of Laporte County, Indiana, was admitted to the Indiana Hospital for the Insane, March 5, 1884. He is a white, American born, thirty-five years old, five feet five inches in height, weighs 150 pounds, has auburn hair, face florid, and has the peculiar epileptic look.

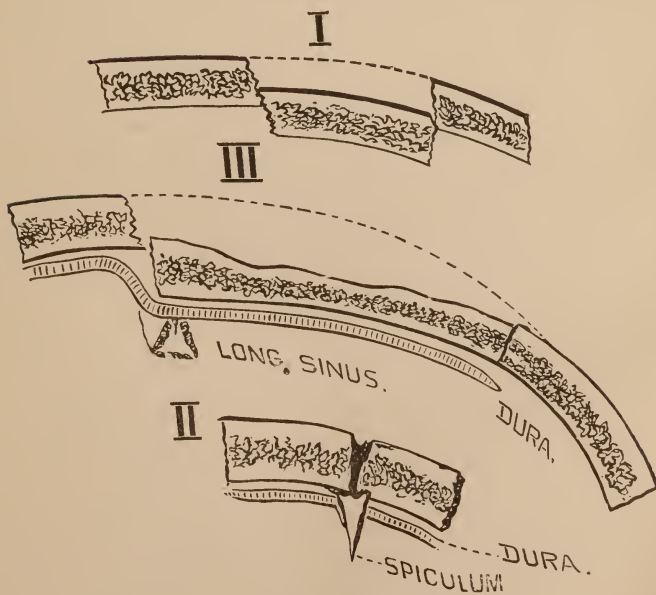
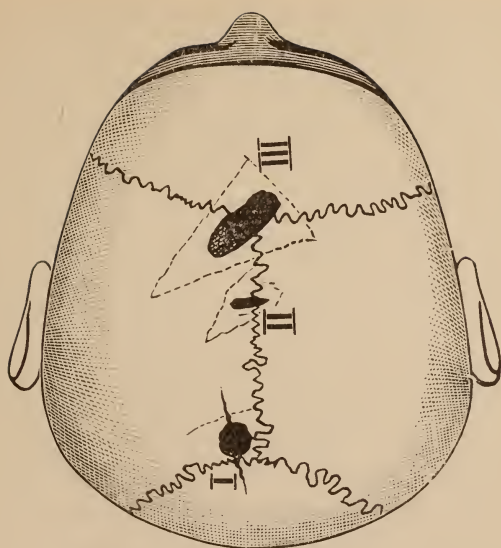
His family physician, Dr. A. J. Mullen, gives the following history of the case:

I have treated Mr. H. for traumatic insanity, caused, no doubt, by a fall from a scaffolding six years ago; patient is sleepless; at times perfectly rational, at others exhibits strong suicidal mania, and treacherous homicidal proclivities; sometimes so violent that he must be tied down.

There is a depression of bone on the left parietal near the osculation of the right parietal and the occipital. He has lost his memory, and since the accident has had epileptic convulsions, and has become an inebriate and a morphine taker.

Such is the brief sketch in the doctor's own words. The fall referred to was from the top of a house to the ground, a distance of twenty-five feet, striking upon the corner of a brick.

Upon the admission of the patient to the hospital, it was found that besides the use of alcoholic stimulants he had for years taken large doses of morphia to allay the intense pain which he suffered, at all times in some degree, always increased in the evening, and fluctuating with atmospheric changes. The morphine was not



discontinued when he came to the hospital, because his suffering was something intense, and his ravings and excitability could alone be controlled by that drug.

After a month's treatment, in which time all we could do in the way of improving his general health was done, a careful examination of his head was made, when a spot on the left side of the cranium corresponding to the portion which covers the lower third of the left occipito-parietal fissure and upper parietal convolution was found. The depression was quite perceptible both to sight and touch; the scalp was bald over a space of a silver dime, and showed evidences in the margin of the exit of two or three small sinuses, from which exuded a drop of half dried pus.

On or about the 12th of April, having the patient under chloroform, we made a very free incision of crucial form across the depression; found the margin about the depressed bone much elevated by additional layers of new bone growth, which caused the depressed portion to appear as if sunken a quarter of an inch below the level of the cranium, but in reality the depression was about equal to half the natural thickness of the skull. With an elevator I got a purchase upon the outer table through the small opening of the discharging sinus before mentioned. With considerable effort I lifted this table from the inner one, which had a roughened black appearance. The diploë was in a necrosed condition. The lower fragment or internal table was immovable, and seemed as firmly fixed as the normal skull. The sinuses did not enter through the internal table. With a chisel I proceeded to cut out the depressed portion, which nature seems to have reinforced by thickening the margins of the bone below. The removal extended to the depressed bone and the thickened margin, exposing the brain at this part the space of a circle one inch in diameter.

Over this wound the flaps of the scalp were drawn by three or four stitches, and dressed with cold water dressing. The patient awoke from the chloroform with some sickness of the stomach, which half a grain of morphia allayed. He rested tolerably well, and found to his delight next morning that he was free from the pain and abnormal mental condition which had been his constant companion for years, since the moment of his fall from the house-top.

Now there is nothing peculiar about his treatment from that day until he left the hospital, on the 20th of September following. Two doses of morphia within twenty-four hours, was the only medicine taken, and on the third day Mr. H. was up and about. The wound healed kindly, and as for the surgical part of the case, ended here.

In review, we see before us a man whose history prior to a fall was that of a sober, quiet, industrious man. The fall is followed by a change in the whole nature; he becomes an epileptic, his natural affections are perverted, he endeavors to kill himself and his best friends—to kill anybody at times—and yet has periods of perfect sanity. He walks about, and occasionally works a little, for a period of six years, but finally the mind wasting under the disease, he becomes almost demented, and is sent to the hospital more for keeping him from murdering some one, or killing himself, than for curative purposes. A very simple surgical operation lifts a little tablet of bone that is depressed out of line of the internal surface little more than the sixteenth of an inch, and in forty-eight hours the patient goes forth a changed man. He no longer craves the narcotic to allay his pain, for the pain is gone. He no longer craves alcoholic stimulants, for the depression of spirits caused by his condition is

removed. He has lost his suicidal mania and his murderous tendencies. He no longer raves, fights and swears, but is converted into as mild mannered a man as you would wish to see. After watching the case until the 20th of September, and finding that he remained in the same condition, he was discharged cured.

I have no desire to comment or draw conclusions regarding the psychical phenomenon caused by the slight depression, and the results of removal; it would lead into those fields of discussion "where fools madly rush, while angels fear to tread." Had Mr. H. committed murder during any part of that period of six years, he would have been sentenced to be hanged by the average "honest jury" of his countrymen.

CASE II.—John Greig, of Marion County, Indiana, native of England admitted to the hospital July 30th, 1885, æt. 47; machinist.

Three years before admission was struck on the head by a stove-lid lifter. He was taken home in an unconscious condition, and so remained for six hours, and confined to his bed for several days; he was soon able to resume his work, which he continued to do after a fashion for six months. From this time on he became negligent, careless about his clothing, lack of interest in anything; finally melancholy and suicidal. August the 21st, he was put under the influence of chloroform, and a careful examination made which showed a small scar not larger than a grape seed over the parietal suture, an inch and a half from the coronal; a triangular flap was made, the scalp was found adherent to a very slight depression in the skull about one-fourth of an inch to the left of the centre; I attempted to enter the point of the trephine into this depression, when a stream

of blood gushed forth steadily, causing me to desist. The chisel was then taken in hand and a few blows with the hammer speedily dislodged the surrounding bone to the extent of half an inch wide by one inch long; a spicule of the internal table was found puncturing the dura, which corresponded in size and shape to a headless carpet tack. Water dressings and a bandage were the only applications to the wound, which healed by first intention; the patient was about the third day, and went home on the seventh day, "a new man" as he expressed it, and has been able to continue his work as a stove moulder from that time.

CASE. III.—Henry Stevens, age 23, American, was admitted to the hospital from the State prison where he had served a term of three years. The following letter from the warden gives all the history we have regarding the case:

"Admitted to prison from White County; burglary; 4 years; age 17; single; weight 149 pounds; scar on left hand; bad scar on top of head; skull has been broken. While in the prison he was kept in his cell; never talks."

Patient was admitted to the Indiana Hospital for the Insane, "October 17th, 1882; age twenty; diagnosis, dementia."

The observations made by physicians and attendants agree that he was dull, melancholic, slow to comprehend, countenance pale, sits constantly with eyes turned downwards and lids nearly closed, as if to avoid the light, sometimes picks his clothing to pieces, is not filthy. If spoken to sharply, he has been known to answer by a word or two, but irrelevant to the question. This has been known to occur twice or thrice in three years.

February 15th, patient was examined. He is a well-formed man, weighing perhaps 150 lbs., shape of head symmetrical, face pleasing in outline, but totally devoid of expression, eyes nearly closed constantly. He came upon the table without resistance or any expression of anxiety. Inhaling æther, there was a little excitement in which he spoke, saying "my father, my father," after which he was perfectly silent during the operation.

A well-marked depression was found beginning at the middle and in front of the coronal suture, where it was deepest (one-quarter inch) and extending obliquely backwards and downwards on the anterior left parietal, being two inches long and one inch wide. The depression in the frontal portion was one-quarter inch and faded away in the lower portion to a level with the normal bone.

An incision was made from a line that would be marked upon the skull, on the coronal suture (the left side) one inch from the junction of the parietal, extending an inch forward on the frontal and carried three inches downwards and back towards the outer third of the occipital, left side. The other was carried from two inches and a half to the right of the parietal, and an inch below the right coronal intersecting the lower incision, making a flap with a base of three one-half inches and four to apex. Scalp closely adherent to depressed portion of bone. The trephine five-eighth inch diameter, so that a semilunar button was removed from the normal bone in front of the greatest depression. Then with a three-eighth inch gouge, such as used by wood carvers, all the depressed bone was chiseled away, exposing the dura for more than one inch in breadth and two inches long, crossing the longitudinal sinus obliquely.

The scalp was thick and the loss of blood about two

pounds. The bleeding from the dura (not attached) was slight and arrested with a little pressure continued for two minutes, the hemorrhage from the diploë was free but was instantly arrested by pressing beeswax in which pulv. ferri persulph. had been worked.

The dressing was a compress and slight bandage. Upon coming from under the influence of the æther, he said, "I want to vomit," in four hours he called for the urinal, and spoke clearly: "You said they would have to operate."

The second and third day his pulse ranged from 120 to 130; respiration, 20 to 24; temperature, 100 to 105.

Took milk occasionally in small quantities. Occasionally says, "I'm tired," "I'm too tired," "I want a drink." When given a drink of water, some fluid extract of digitalis having been in the same glass, he remarked, "It tastes more like medicine than water." On the fourth day I said, "Henry do you want an apple?" the answer came quickly, "Yes, I will eat it too, you bet." I asked him, "Why don't you answer whenever you are spoken too, Henry," in a moment he answered, speaking quickly, as if wishing to be through with the task, "A man should consider before he speaks." At another time he spoke to the attendant for some neglect saying, "I will report you to Mrs. Draper, and give you a smack on the gob."

Two weeks have now passed, the wound is healed on the lower side, suppurating freely above. The patient is quiet and obedient, with decided tendency to be neat, keeping his bed in order, brushing off any crumbs that might fall, removing any soiled rags, etc.; is particularly modest, going by himself to the urinal, and covering himself from the sight of the attendant; his appetite is good, and he is recovering strength.

The case will be watched with extreme interest. The

only fear I have is that there may be some counter-fracture or adhesion at the base of the skull.

In presenting these cases I will add that my conviction is, that depressions of bone, when occurring before the development of the insanity, should be removed. I prefer the chisel at all times to the trephine as being safer, particularly over large vessels.

Upon the diagram will be found the location of the three operations, as well as the sectional drawings of the depression.

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NOTE.—I would be thankful for any statistics of trephining for the relief of insanity, by American superintendents, or others.

W. B. F.

A CASE OF SUB-CEREBELLAR SARCOMA.

BY E. K. CLARKE, M. D.,Superintendent of the Kingston Asylum for the Insane, Ontario.

Israel Harris, aged forty-six, native of Poland, was admitted to Kingston Asylum in 1868, and at the date of admission suffered from acute mania, but eventually his mental condition became that of dementia. At all times he enjoyed excellent physical health, was possessed of an abnormally large appetite, and noted as being a very rapid eater. During the eight months prior to his death he had four or five narrow escapes from choking; indeed on three occasions was thought to be dead, and even after large quantities of impacted food had been removed from the mouth and pharynx, it was some time before signs of returning life became apparent. These frequent chokings were supposed to be the unavoidable sequel of the man's gluttony and we were inclined to think the attendants somewhat careless in looking after the patient, although they appeared to be very attentive to him when an officer was present at meal times. It must be confessed no one thought the patient was suffering from extensive and malignant brain lesion. On the 3d of July, we were again called to see Harris, and on this occasion he was beyond help. Food was removed from the mouth and pharynx, and every means taken to restore the patient, but without avail.

It is possible some points diagnostic of brain tumor might have been apparent during life, but certainly no member of the medical staff suspected trouble in the brain.

AUTOPSY.—Autopsy made twenty hours after death. Rigor mortis not present. Thoracic pleura slightly

adherent to walls of chest. Lungs healthy, crepitant and dark colored. Heart normal. Trachea and right bronchus filled with pieces of pulpy food, left bronchus free from obstruction.

Head.—Scalp thick. Skull dense and thick. Membranes not adherent. Brain under the average size and weight. Convolutions flat. Sulci shallow. Cerebellum and medulla much softer than normal. Beneath the right hemisphere of the cerebellum, and extending down the right side of the medulla was found a soft tumor, the pressure from which had caused marked atrophy of the cerebellum and medulla. This tumor was of irregular shape, very soft, pinky-white in color and about the size of a hen's egg. Apparently the tumor had no capsule and as far as could be ascertained the growth was quite independent of the tissue of the cerebellum. The exact relations to the membranes could not be made out perfectly owing to the almost gelatinous consistence of the tumor.

Microscopical Examination.—The tumor was hardened in the usual way, and sections stained with carmine and picro-carmine. The growth was found to be made up of immense masses of caudate spindle-cells interspersed with collections of red blood corpuscles. The tumor was clearly a spindle-celled sarcoma.

Remarks.—The pressure upon the medulla easily accounted for the repeated chokings, and it must be confessed considerable humiliation was experienced at the fact that such extensive brain trouble had existed without being suspected. The lesson taught is instructive.

ABSTRACTS AND EXTRACTS.

HYSTERO-CATALEPSY IN A MALE.—Dr. Allen McLane Hamilton reports in *Brain*, January, 1886, the following rare case which occurred in the practice of Dr. Robert Abbe, of New York. It is especially interesting by reason of the success which followed testicular pressure as a therapeutic measure :

C. G. B., aged 35, married eight years. 'Father addicted to the excessive use of stimulants, and irascible. The patient is an intellectual man, and one of superior capacity. Mother of opposite type, a beautiful woman of quiet, even temperament, free from any trace of hysterical nature. Patient rather fat, and of one hundred and seventy pounds average weight. Health ordinarily excellent, though he has suffered from what was generally believed to be chronic peritonitis of several months' duration, eight months ago. He also had an attack five years ago, of pneumonia, with sequelæ, which one of his physicians thought was mild cerebro-spinal meningitis. Three years ago, while labouring under business reverses, he clandestinely began to take morphine—in eighth of a grain pills. The morphine habit grew rapidly until date, and he has never stopped it, and has taken at times as high as sixteen grains a day, but usually three grains in two doses, morning and night. His intellectual habit has been less bright during this time, though I have usually regarded him as lazy in mind, and from a boy disposed to exaggeration. His mother and senior brother (who is now in business with him) have for years been half credulous of spiritualism, but the patient has always scoffed at them. On the 16th of February last, he had a chill, which marked the beginning of pneumonia of a well-defined croupous type. He began convalescence after the tenth day, and was nursed by a female trained nurse, who resorted to massage quite frequently to quiet him from nervousness, supposed to be due to discontinuance of the morphine, which was inadvisable under the circumstances. He entirely gave up the drug rather abruptly during the fever, though some frequent and considerable hypodermic injections were given for the relief of pain up to the crisis. On Monday, the 2d of March, when convalescence was progressing, and he had sat up for two hours during the afternoon for the second time, he retired in a comfortable mood. The nurse had been dismissed, and he was alone with his wife. About nine

in the evening he said he did not think he would sleep well. His wife tried to soothe him, but in a few minutes he began to show nervousness, and acted queerly. He began to kick off the bed-clothes, and act as if in a fit of petulance or temper; then turned over and beat the pillow violently, as if to vent his feelings. This was soon changed into a state of mental pre-occupation and moaning, quiet conversation in secret with imaginary people, exclamations of, "Oh, mother, mother!" as if she was seen in a dream. His fists were clenched and relaxed alternately; eyes rolled up imploringly, and apparently fixed on space. The head was occasionally buried back in pillow. Has general anæsthesia, though moaning, as if in a dream, "My head—my head; it aches so!" Pupils rather widely dilated, but re-acting to candle-light rather sluggishly. He did not vary much from this state all night, except to remain quiescent for two or three consecutive hours, with apparent insensibility, and mostly complete unconsciousness. Towards the morning the spell seemed to relax, and he half awoke, dazed, and declaring that the night had been a perfect blank, though sometimes he had seemed to answer questions intelligibly.

He drank milk freely, and seemed to have come to himself, but soon lapsed again into the queer unconsciousness. Many such relapses occurred during the day at intervals of half an hour, or at times two or three minutes only occurring.

They always began by a muscular fixation of the head backward on the pillow, eyes rolled upward a little, and lids open. (When I saw the case with Dr. Abbe, there was a slight tremor of the lids.) The ophthalmoscope showed a perfectly normal retina. The functions remained normal. Urine was passed in ordinary quantities, and the pulse never varied from 90, throughout the beginning, middle, or end of the attack, or the intervals. Temperature $99\frac{1}{2}$, not altered.

I saw him about twenty-four hours after the commencement of the attacks, and while sitting by his side he complained of headache, and after shuddering slightly, the fixation of the head just alluded to began to be apparent. There was first rolling upwards of the eyeballs, with a slight tendency to convergence, suspended respiration, and afterwards some slight oscillation of the eyeballs, and audible respiration. The colour of the face was, if anything, rather pale, and the lips were somewhat livid. When I extended the upper or lower extremities, they remained in the position in which I had placed them, and there was slight, almost inappreciable, *flexibilitas*

ceræ. There was no relaxation within a reasonable time—one or two minutes. With this condition there was very decided analgesia, and a pin was thrust into the surface, and the hair pulled, without any expression of suffering. The patellar tendon-reflex was, if anything, slightly exaggerated, though no cremasteric reflex could be evoked. In a period of about five minutes, there was some appearance of volitional return, for he opened his eyes, moaned, and placed his hands upon his head, and appeared to suffer. After rousing him, he was able to indistinctly call attention to his distress, but almost immediately he again became rigid. I this time extended and slightly adducted his hands and forearms, placing the tips of his little fingers and thumbs in contact, so that a sort of arch was presented. This implied a very delicate muscular co ordination, and in a conscious, non-cataleptic person would require considerable effort. The position was maintained, however, without so much as a tremor, for two minutes. I then, bearing in mind the efficacy of ovarian pressure in corresponding states in woman, suggested to Dr. Abbe that he should make firm pressure upon one testicle. This he did, and almost *immediately* the rigidity relaxed, and the arms dropped. Coincident with this there was a return to consciousness.

Dr. Abbe, who closely watched the case, says, "Testicular pressure broke the charm, and they (the attacks) never returned." On the following evening he declared he was going to be nervous and sleepless again, and his wife said he began to act in the same way. I found him at 10 P. M. nervous, but apparently trying to control himself, yet kicking first one leg, and then the other, under the bed-clothes. He would lie quiet for a moment, and then snort and turn over.

I ordered his wife and nurse, who had returned, out of the room, and systematically bullied him for two hours, when he gradually quieted down, though not much sleep came.

During the catalepsy, his constant complaint on waking was that his head pained as if "*bursting*," front and back.

He had told me regarding sexual functions that, while vigorous, he had not had, he believed, more than two emissions during the act of coitus during two years past. The third day before the display above described was marked by three seminal emissions, without provocation or erection; they made him feel weak.

Others had occurred during the weeks he was in bed convalescing, and occasionally followed massage. The nurse had

habitually taken temperature per rectum, and had noticed an oversensitiveness of the perineum, which made him squirm, and, on giving enemata, made her desist.

After the night of scolding, he rapidly changed, and not a nervous sign appeared again. He walked out on the fourth day after, and was well in a week.

This, so far as I know, is the first reported case of hysterocatalepsy in a male, though I believe that most of those cases of catalepsy met with among young subjects, of either sex, present an hysterical element.

BRAIN SYPHILIS (*Berlin. Klin. Wochenschrift*, No. 1, 1886).—Gerhardt remarks that brain syphilis can show itself in endless forms and combinations, according to the quality and locality of its anatomical sub-stratum. Yet, in many cases, without confession of syphilis or demonstrable traces of it in other organs, one may make the diagnosis. This should be the aim of the physician, and should be more frequently attained than it hitherto has been. The disastrous maxim, to give a little iodide of potass in all obscure cases of brain disease has healed few and been unsuitable to many more. One may enumerate a great number of single symptoms which are very important, but not of themselves demonstrable. To such belong severe diffuse brain disturbances characterized by unilateralness, incompleteness, and incomprehensible inconstancy. In the same category are quickly repeated apoplectic attacks in young people free of heart disease, paralysis of ocular muscles, especially ptosis, epilepsy arising without particular cause in later years, cortical epilepsy, monoplegiæ, acute bulbar symptoms, tumour symptoms which cannot be explained by one focus of disease. The mere enumeration of these and many other isolated symptoms and groups of symptoms is not of much use; it is, perhaps, better to accentuate a few general features. As endocarditis is the most frequent anatomical lesion, apoplectiform attacks are especially often observed. To Gerhardt it seems almost permissible to comprehend apoplexy as a symptom, and syphilis as its fundamental cause. In 63 cases (tumours excluded) 13 were certainly syphilitic, and in 9 others suspicion of the same was almost certainty. Strictly, syphilitic apoplexy most frequently arises by the supervention of autochthonous thrombosis in arteries constricted and narrowed by slow changes. This is prefaced by prodromata of a more pronounced

kind than is usually the case in sanguineous apoplexy. The attack may be very complete; it is more typical, however, when repeated frequently in short time and without loss of consciousness. If the terminal twigs of the carotid are affected we have a common hemiplegia; if those of the vertebral, then we have bulbar symptoms. Gummata are quite commonly superficial overlaying tumours (Beleggeschwülste). They may cause the most diverse cortical symptoms and paralyzes of the cranial nerves; but one thing they cannot bring about, and that is the general violent headache with deep stupor of massive expansive brain tumours, such as gliomata; when cortical, monoplegia, cortical epilepsy, particularly mixed forms of epilepsy and hemiplegiæ, will be brought about; when basilar, crossed paralysis, severe implication of isolated cranial nerves, and so on; ptosis will also play its rôle and occasion frequent vertigo, and in both other muscles of the eye will be paralytically involved. Like syphilitic skin diseases, which metamorphose themselves into each other, and run through the series from roseola to deep gummatous abscesses, so polymorphism is the chiefest attribute of brain syphilis. We have epilepsy, for instance, on which an apoplexy shortly follows, or to which marvellous disturbances of the faculty of thinking, of memory, or of speech are added, or in the reverse order. Matters are often so that one cannot explain the changes by supposing them to emanate from one easily proved focus. Many of those cases are curable if seen and recognized early; later, they are not so; one only needs to think of the endarteritis and the consecutive brain softening which follows complete obliteration of the vessels to believe this. The cases must be treated as early, as energetically, and as long as possible. For many weeks 3-7 grammes of Grey ointment must be rubbed in, and 2-5 grammes of iodide of potass taken daily. [Grey ointment, "Graue Salbe," is rather stronger than our Ungt. Hydrarg. Fort.]—*Edinburgh Medical Journal*, February, 1886.

A NEW METHOD OF LOCALIZING THE POSITION OF THE PARTS ON THE SURFACE OF THE BRAIN IN THE LIVING SUBJECT.—As is well known, various methods have been suggested for localizing the position of the convolutions and other superficial parts of the brain in the living subject. There are certain grave objections to nearly all of these, the chief being, firstly, that they are mostly founded on the position of the sutures, which are not

always easy to find through the scalp; secondly, that although the grosser convolutions and fissures may be mapped out with tolerable accuracy, yet finer details, which are often exactly what are wanted in operative procedures, are left very much to chance; and lastly, that the hair and the position of the patient in bed are serious incumbrances in making the various measurements. In cases of injury there is another objection, namely, that one cannot always recall on the spur of the moment the necessary rules laid down by the authors of these various schemes for finding the fissure of Rolando and other landmarks. What would be much more serviceable than such methods would be a means of automatically mapping out the position of internal parts by subdividing the scalp into a number of equal-sized areas. Such a method has lately been devised by Professor Hamilton of Aberdeen, which promises to yield very satisfactory results, and to render the localization of the surface of the brain, through its various coverings, a matter of greater certainty.

The method briefly consists in this :—A wire framework is made to cover the scalp so as to map its surface out into a number of squares. The special advantage of employing wire is that it can be passed through the hair and brought to lie in actual contact with the surface. One strong wire of steel band runs round the head from the root of the nose to the occipital protuberance. Another passes from front to back in the middle line, and between these run transverse and horizontal wires, which can be moved respectively backwards and forwards, or upwards and downwards, so as to adjust themselves to the size of various heads. These are so placed as to map out the scalp into a series of squares of as nearly as possible equal size. In order to find what each square corresponds to in the parts beneath, Professor Hamilton fixes the apparatus on the dead subject, and after it has been accurately adjusted, takes it off until the scalp and calvaria have been removed. It is now readjusted over the exposed brain, and the relationship of the framework to the underlying parts is recorded by means of photography. As each square has a definite number, the comparison of a large series of photographs gives most instructive results.

Another method of employing a similar apparatus is to localize the fissure of Rolando by means of one of the many methods recommended. From the horizontal band which runs round the head from the root of the nose to the occiput a wire passes upwards, and this is placed over the situation of the fissure. The parts

anterior and posterior to this can now be subdivided into squares in the manner before mentioned, and the position of each recorded by photography. The numerous details so important in operations necessitating trephining, as well as the equally important matter of diagnosing the exact position of a cerebral lesion, can by these methods be noted down in a chart, reference to which would alone be necessary in order to find out where the underlying parts are located. The position, for instance, of the middle meningeal artery can be found without any difficulty.

We believe that before long Professor Hamilton will describe the method in detail, and give the result of his observations.—*Edinburgh Medical Journal*, March, 1886.

LOCALIZATION OF BRAIN FUNCTIONS.—Probably no subject has of late so engrossed the attention of students of human and comparative physiology, or has given rise to so many fierce discussions, as the theory of the localization of brain functions. On the one side were those who with Munk and Ferrier contended that the various functions of the brain could be strictly localized in circumscribed areas of the cerebral cortex; on the other side were those who with Goltz denied the possibility of any such localization. From 1870, when Fritsch and Hitzig showed that the cerebral hemispheres could be stimulated by electricity, to the present time, a host of observers have been attacking the problem. The latest researches published in Germany and Italy are of especial interest, and of the utmost importance both theoretical and practical. Practical, because of their great value in medicine and surgery; theoretical, because they seem at last to open to the physiologist the golden mean between the positions of the extremist, and to offer a common ground where conflicting opinions may be harmonized.

The first step toward reconciling the great mass of apparently contradictory evidence was Exner's hypothesis of absolute and relative areas. Before that, the usual method of disposing of irreconcilable facts was to give a comprehensive denial of them; hardly a satisfactory way of dealing with evidence. According to Exner's view, the absolute areas are those regions of the brain surface injury to which invariably produces certain characteristic results, while injury to the relative areas frequently though not invariably causes certain symptoms. The difference between the two seems to depend solely upon the kind of nerve fibres con-

nected with them, whether they are fibres connecting various parts of the brain surface with each other, or whether they come from the body at large. The importance of this view of Exner's has not been very generally recognized, but recent investigations are confirming it very satisfactorily. These results seem clearly to show that the notion of small circumscribed areas, each one of which performs certain definite functions, must be abandoned. On the contrary, the areas would seem to be overlapping and intermingled each one gradually diminishing in intensity as we pass outward from the centre of the greatest activity. The results of Hitzig's latest experiments, as well as those of Lob, Kriwotow, Daniells and Luciani and even those of Goltz, with the pathological views given by Mariani and Charcot and Pitres, all make for Exner's hypothesis implicitly if not explicitly.

These experiments, do not, however, indicate any localization of the psychical functions, except with regard to certain memories, which seem to depend upon the same areas as the organs of special sense. What may perhaps be a beginning of psychical localization is given by an experiment of Hitzig's, which showed that dogs that had lost their frontal lobes forgot all their tricks they had known before the operation and could not be taught them again. The healthy action of the mind depends rather upon the correlation of all the parts of the brain than upon any area of its surface. As a confirmation of this view may be quoted a very striking observation by Tucek, who has shown that in dementia paralytica the fibres that connect together the various cells on the surface of the brain degenerate and lose their function.

In point of fact, it now would seem that there has at last been a way opened which will lead to an approximate solution of the long vexed and most important question of the localization of cerebral function.—*New Princeton Review*, January, 1886.

COUNTER-IRRITATION IN GENERAL PARALYSIS.—Dr. Pritchard Davies, of the County Asylum, Barming Heath, Kent, claims (*Journal of Mental Science*, January, 1886), to have had decidedly beneficial results from counter-irritation by means of iodine in cases of general paralysis, especially in the earlier stages of the disease. While unable to say that he has by this means actually cured any case, he is satisfied that he has prolonged life, and is disposed to believe that if adopted at the outset of the malady—*i. e.*, before the patients are certified as insane—the

result would be most encouraging. He applies the liniment of iodine over the whole spine, and also over each side of the neck. This is not done all at once, however, for the object being to keep up a prolonged action, he paints one side of the neck and a portion of the spine until signs of vesication are distinctly visible, then the other side of the neck and the remainder of the spinal region. Thus, while these second painted parts are getting tender, the first treated are healing. In this way he has found it possible to keep up well-marked counter-irritation for weeks or even months together. To be of any benefit, indeed, it is not considered advisable to discontinue the treatment under a month, and Dr. Davies has frequently used it for much longer periods with marked ultimate advantage. A double action of the iodine is suggested, viz.: firstly as a simple counter-irritant, and secondly, by combining with the exuded lymph, the formation of a soluble compound which is removed by absorption.

THE PSYCHOLOGY OF SUICIDE.—Wholly apart from the theory of insanity, suicide has its psychological aspect, and it is to this we would direct attention. Distress of mind may be so great as to impel a perfectly sane mind to seek an end to its miseries in death. The sooner this truth is perceived the better will it be for all concerned, both the distressed and those around them. The notion that no one would commit suicide unless he were insane is by no means reasonable or well founded. There are states of mental agony in which the mind is in no danger of losing control of itself, and yet it is often in very great peril of being driven into a corner without seeing a way of escape, and of assuming that death is preferable to life. It is in vain to try to make ourselves believe, or to persuade the experienced and observant, that anyone and everyone in his senses must needs choose to bear the ills that are rather than fly to others he knows not of. When extremities of mental misery are reached, the sane and sound consciousness is quite capable of forming a rational judgment that nothing in the future can be more terrible than the present horror. There is in all minds a tendency to think better of the unknown than of the known. The sincerely religious man, who has no doubt about the reality of his spiritual impressions and conceptions, looking at the matter from his point of view, naturally and reasonably enough imagines that it is impossible for a man to dare death and the future rather than endure any form of trouble

in this life. The non-religious, or merely formal believer, does not, however, in his inner conscience feel the same, whatever may be his glib professions on the subject. It is quite conceivable to him that there are chances in favour of bettering his condition by death, even though it be by putting himself out of existence altogether. We all know how often the irreligious long to die when in pain or in weariness. In plain truth, no inconsiderable proportion of mankind, we might even say the majority of mortals, are not so impressed with the future but that they would prefer to incur its risks rather than prolong the endurance of some agonies, mental and physical, here; and though we may think such persons very much in the wrong and self-deceived, we have no right to describe them as *insane*. They are as sane as those who take a different view. Why, then, should we earnestly strive to find an explanation for self-murder by supposing temporary or any other form of insanity as its excuse? Psychologically, there is nothing whatever to necessitate or call for the idea of mental unsoundness in explanation of suicide.—*The Lancet*, February 27, 1886.

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REVIEW OF ASYLUM REPORTS.

Annual Report of the North Carolina Insane Asylum for the Year ending November 30, 1885. EUGENE GRISSOM, M. D., L.L. D., Superintendent.

Patients in Asylum at date of last report, 243. Admitted since, 97. Discharged recovered, 40; improved, 12; unimproved, 9; not insane, 1. Died, 24. Remaining November 30, 1885, 254.

Dr. Grissom refers to the disposition of the criminal insane. He complains that the repeated decisions of the courts sending persons accused of grave crimes to the asylum, upon a verdict of insanity, are filling the wards with cases that are unfit to be associated with virtuous insane, while the room is occupied to the exclusion of meritorious citizens who are in no way connected with the calendar of crime. We quote from Dr. Grissom's report for 1872 on the same subject:

Every reason that can be urged against the intimate association of the pure and upright with the base, degraded and corrupt, whose character, habits and conversation might contaminate or offend, applies with increased force to such involuntary companionship between those whose over-sensitive and disordered minds exalt and intensify their sensibilities, tastes and conscience. The convict insane in this State are not likely soon to become numerous enough to justify the establishment of a separate asylum for their accommodation, but suitable quarters might be provided, in connection with the State Penitentiary now under construction, and their treatment entrusted to the care of the physician of that institution.

Since the above was written, the evil has grown in North Carolina until the frequent admission of persons acquitted of grave crimes on the general plea of insanity, is subjecting patients of pure and moral lives to degrading associations besides in many cases introducing persons into the asylum, through the zeal of friends and ingenuity of counsel, who, Dr. Grissom believes, can not be in need of the medical treatment administered there. He urges the separation of the two classes of insane and the preservation of the standard of the asylum as a hospital for disease purely, and not a refuge for crime or a reformatory for the wicked.

Sixth Annual Report of the State Hospital for the Insane at Norristown, Pa., for the year ending September 30, 1885. ROBERT H. CHASE, A. M., M. D., and ALICE BENNETT, M. D., Ph. D., Resident Physicians.

Department for Men.—Number of patients at date of last report, 576. Admitted since, 301. Discharged recovered, 59; improved, 32; unimproved, 6. Died, 69. Remaining September 30, 1885, 711.

Dr. Chase states that another year's experience in the use of paraldehyde as a hypnotic confirms the good opinion of it expressed in his last annual report. One of his assistants, Dr. Harry C. Harris, has carefully studied its effects in various forms of insanity. This gentleman's conclusions are given in the report. He claims that the main advantage of paraldehyde over choral is that the use of the former is free from danger as regards the heart. The sleep produced is in proportion to the size of the dose administered.

The night-watch service of this department consist of seven paid nurses and six patients as assistants.

Department for Women.—Number of patients remaining September 30, 1884, 538. Admitted since, 315. Discharged recovered, 39; improved, 37; unimproved, 10. Died, 56. Remaining September 30, 1885, 709.

The fire in the insane department of the Philadelphia Hospital, early last year, necessitated provision for many more patients in the already overcrowded hospital. One hundred women were transferred from the Philadelphia Hospital to Norristown, March 27th. At the date of the report the disturbed wards, which were designed to accommodate twenty patients, contained forty-five each. Dr. Bennett occupies patients of comparatively feeble mental power in brush-making. During the year chair-caning and basket-making have been introduced with success, a skilled workman having been employed for a time to give instruction to selected attendants. Five and six patients have been daily employed at basket-making, and about twelve daily at chair-caning. School-exercises have also been introduced. Instruction includes reading, writing, spelling, dictation, arithmetic, geography, history, natural history, physiology, gymnastics, drawing and music. The kindergarten methods have been found to answer a good purpose in patients "of comparatively feeble intellects and especially the melancholy with tendency to stupor." A third specially qualified attendant has been placed in charge of patients showing a taste for drawing,

coloring and miscellaneous fancy-work. Dr. Bennett has felt greatly encouraged by the success of these new departures. "Standing, as we do," she says, "at the very beginning of a great work, as we believe this to be, we speak with extreme diffidence of the little we have accomplished as compared with what we hope and wish for the future. Those interested in the subject are directed to the reports of Dr. Lalor, of the Richmond District Asylum, Dublin, as showing what has been done elsewhere in this direction."

Appended to the Superintendent's Report is that of the pathologists, Drs. Francis X. Dercum and Ida V. Reel. It embraces a report of fifty autopsies with a summary after each group, and is a creditable contribution to the pathology of insanity.

Tenth Annual Report of the State Asylum for the Insane at Morristown, N. J., for the year ending October 31, 1885. EDWIN EVERETT SMITH, M. D., Medical Director.

Patients in the Asylum November 1st, 1884, 736. Admitted since, 278. Discharged recovered, 42; much improved, 22; improved, 34; unimproved, 32; as inebriates, 6; as opium habitués, 2. Died, 56. Remaining, October 31, 1885, 829.

This is the first report under the new régime of this asylum. It will be remembered that reference was made not long since in this JOURNAL to the complete separation of the administrative from the medical department. Our views on this subject have been freely expressed and need no repetition. The managers complain of the incomplete condition of the sewerage and ventilation and are powerless to do, in the absence of state assistance, what the grand juries of the county of Morris demand. In view of the late serious epidemic of typhoid fever in the asylum, it is to be hoped the State will not withhold the appropriation for this urgent necessity. The source of the epidemic is believed to have been the filter beds on the north side of the house, 570 feet distant from the building, about which the source of danger derived from a former case probably remained. The removal of these beds is reported to be advancing to completion.

We find in Dr. Smith one more earnest advocate of the separation of the criminal from the ordinary insane. He also suggests the appointment of a special pathologist.

Report of the Superintendent of the Provincial Lunatic Asylum at St. John, N. B., for the year, 1885. Dr. JAS. T. STEEVES.

Dr. Steeves reports: In residence January 1, 1885, 380 patients. Admitted, 131. Total, 511; men, 276; women, 235. Discharged recovered, 29 men, 17 women. Improved, 18 men, 5 women; unimproved, 1. Died, 36—17 men, 19 women. Remaining at end of year 405, of which he "estimates" that 44 are "curable." Dr. Steeves also is of opinion that more feeble-minded—dements, imbeciles and epileptics are sent to asylums than formerly. He justly remarks, however, that retiring and quiet cases are not always to be regarded as "harmless." In this Province no insane are kept in poor-houses. Of the deaths about one-third were from tuberculosis. That idiots do die is not to be disputed, but we still object to dating cases of *insanity* "from birth." Congenital imbeciles and idiots do not "find a place in *every* classification of the insane," nor are they exempt from the usual mode of exit from life "in the State of New York."

Two farms of 100 and 110 acres have been obtained about a mile from the asylum, and a short distance from each other on the sea-shore, and an annex built for the reception of the "quiet chronic indigent insane." The heating is by "hot water, large open grates and stoves."

Report of the State Hospital for Insane at Warren, Pa., for the year ending November 30, 1885. Dr. JOHN CURWEN, Superintendent.

The financial year having been changed, this report is for fourteen months. Dr. Curwen reports: Patients, October 1, 1884, 483; admitted since, 299; total, 782. Discharged restored, 29; improved, 51; stationary, 21; died, 58; remaining, 628.

The alms-house fire in Philadelphia, caused a sudden addition to the number of admissions here. Dr. Curwen dwells upon the need of increased hospital accommodation in the State, since the law preventing the detention of the insane in county alms-houses. He also discusses the alleged proportionate increase of insanity, and finds it mainly apparent only. The affairs of the institution move on quietly and prosperously.

Twentieth Report of the Connecticut Hospital for the Insane, Middletown. Dr. ABRAM M. SHEW, Superintendent.

Dr. Shew reports for the seven months from December 1, 1884, to June 30, 1885: In Hospital December 1st, 913, (women, 510); admitted, 209; total under treatment, 1,132; discharged, 78,

(women, 39); died, 39; remaining June 30th, 1,019, (women, 557). Of the admissions, 51 were re-admissions; and only 65 acute or recent cases, 42 dating back at various periods from ten to forty years. There were 43 over seventy years of age, a sad indication, as Dr. Shew thinks, that society has become "less tolerant of individual morbid peculiarities."

Dr. Shew finds his cases of melancholia the most curable, though their suicidal or homicidal tendency renders caution necessary against premature removal. The preponderance of women, Dr. Shew explains by the greater female population in the State, while they seem more liable to pass into chronic dementia than men.

A new centre building and north wing have been added to the hospital, opened in May last for women. An additional wing for men is also under way. Dr. Shew only confirms the general testimony to the good effect upon patients of improved accommodations.

Forty-Seventh Report of the Columbus Asylum for the Insane, for the year 1885. Dr. C. M. FINCH, Superintendent.

Dr. Finch reports in Asylum, November, 15, 1884, men 413, women 462; admitted during the year, 353; total, 1,228; discharged recovered, 150; improved, 17; unimproved, 119; died, 53. Remaining November 15, 1885, men 411, women 478. The death rate seems less than usual, and yet no less than 15 cases were in residence, an average of only seventeen days. The report shows the institution in excellent condition in all sanitary respects.

Dr. Finch makes some good observations on employment and diversion, and special means of relieving hospital monotony. The work done by patients is largely on the increase, and seclusions proportionately diminished. Of course enlargement of liberty involves a more stringent vigilance.

Twenty-Fifth Report of the Asylum for Insane Criminals at Auburn, N. Y. Dr. C. F. MACDONALD, Superintendent.

Number patients October 1, 1883, 147, (women, 9); admitted, 52, (women, 2); discharged recovered, 17; improved, 4; unimproved, 20; not insane, 2; died, 2. Remaining September 30th, 1884, 154, (women, 7).

Only one casualty has occurred—a suicide, and restraint has been abolished, leaving but a minimum of seclusion. Dr.

MacDonald gives a glowing account of the order and quiet enjoyed without restraint, and quite reasonably declares that this is a question which must settle itself, whatever views may be individually held. It will be well for superintendents generally to describe any improvements in the quality of attendance, or increase in the same, or the effect of better surroundings, more frequent amusements, out-door exercise, &c., in connection with this subject. No question but the universal tendency is to use less mechanical restraint, while our principle has always been to use the least that was indispensable.

A full description of the buildings is given, and the need of a farm is again enforced. As to the law, we can not help thinking that there is something wrong in including persons "under a criminal charge," where no *indictment* has ever been found.

BOOK NOTICES AND REVIEWS.

The Blot upon the Brain. Studies in History and Psychology.
By W. W. IRELAND, M. D., Edin. Edinburgh: Bell & Bradfute.

This is a book of very great interest and entertainment, even for general readers, as well as professional. Dr. Ireland is well known for his literary culture and scholarship, which come out here conspicuously, as well as his capacity for scientific research. The title of the book appears to be drawn from a couplet of Tennyson's, which he has made his motto. Its design is, from the facts and speculations connected with the cause and operation of hallucinations, illusions, &c., to formulate some explanation of the extraordinary events or characteristics in the career of certain remarkable personages of history, without being obliged to resort directly to a theory of insanity in such cases.

Some of the essays have already appeared in medical or psychological journals, and that on St. Francis Xavier in the *Quarterly Review*.

The opening essay on Hallucinations recites cases and phenomena well known in psychiatry, including some described by Nicolai, Herschel, Dr. Kandinsky, Bailarger, Tamburini, Van der Kolk, Nägeli, some of whom give their own experience. We do not understand Dr. Ireland to decide between the different theories of the nature and origin of hallucinations. Meynert ascribes them to a "stimulus applied to the cortex or grey matter of the anterior lobe of the brain." Dr. Tamburini, who has carefully studied the question of sensory and motor centres, thinks the "centre for the elaboration and storing of visual images is not only in the occipital lobe of the brain, as stated by Munk, but

also in the convolution in front of this called the gyrus angularis, to which the same function was first assigned by Ferrier. In front of this lies the tempero-sphenoidal convolution, wherein auditory impressions, heard words, are believed to be realized by the mind; and in front of and above this, in the region of the brain, near the margin of the outer ears, lie the convolutions from which motor impulses are supposed to arise, and by sending stimuli to the descending nerve fibres to put in motion the different muscles of the body." He adds, "to use the words of Hitzig, probably all single mental functions in their entry into matter, or in their evolution from it, are referable to circumscribed portions of the hemispheres of the brain."

Nägeli, the botanist, had perhaps the simplest form of hallucinations. He ascribed them to the "irritated condition of the optic nerves, which, through the means of their connections with the brain, aroused images stored up from earlier impressions, and brought them within the range of perception."

We quite agree with Dr. Ireland, that the theory of hallucinations would be simple if we could stop here, (the intervention of the mind putting its own interpretation upon external or morbid irritation), but we are obliged to admit that "occasionally the mechanism goes backwards, from the centres of *thought* in the brain to the sensory tracts, for sometimes the mental image comes before the sensory one, [and words are enough to evoke it.] This of course holds good in hypnotism, and in some cases of somnambulism, in which a whisper in the ear, or a mental conception or pre-occupation, determines the character of the hallucination."

As Prof. Tyndall said, "the passage from the physics of the brain to the phenomena of consciousness is

unthinkable," so Dr. Ireland says there is "a mystery here that can not be explained. The mind is willing to recognize that the physical phenomena accompany the mental conceptions, but not that changes in matter are the causes of ideas." Is it the *mind* that makes a hallucination "objective," or only the machinery by which the real external usually reaches the mental perception?

These conclusions or inferences arrived at in this preliminary discussion of the *rationale* (if we may so call it) of hallucinations, form but a slender basis of science, it must be confessed, for explaining or even estimating the idiosyncrasies in the lives of remarkable historical characters. The second paper deals with the "hallucinations" of Mohamed, Luther and Swedenborg. Of course, all attempts must be given up to explain the success of the mission and enterprises of such characters by their hallucinations or their epileptiform seizures. It may not be possible to establish the line between extreme enthusiasm and some degree of insanity: but it has already been admitted that the thought of the mind itself may dominate the sensory tract. If physical derangement can be thought to lead up to these extraordinary mental phenomena, it can not at least account for the "method in their madness." As Dr. Ireland says, "The hallucinations of Mohamed took a definite shape and sequence, *adapting* themselves to difficulties, opposition and criticism, in the end working out a religion which from its rapid extension and durability, must have been well suited to the races who have made it their own." He well adds, "it *seemed* as if there were *some one behind*," though this of course is entirely outside of any cognition of science. We do not regard the composition of the Koran as so extraordinary: for besides the legends of Ishmaelism

itself, he had all the materials of Old Testament history before him, as Jo Smith had in the Book of Mormom, with the *sound* of English Biblical *archaism* in his inner ear. We take leave to question Dr. Ireland's statement that "the Athanasian creed has ever been a stumbling-block in the way of missionary Christianity, as it was to the first barbarian converts, the Goths and the Vandals." The barbarian converts simply received their first knowledge of Christianity from those who professed it in that form, but afterwards learned as readily what was the faith of the Catholic Church, till Arianism died out of Europe; and testimony is not lacking, that the scientific precision of the Athanasian Creed is just what is welcomed by the subtle logical habit of the Asiatic mind. At any rate, such statements have no proper place in a scientific work of this kind. It is a good deal more to the purpose, when Dr. Ireland intimates that Mohamed adjusted his system to the natural appetites and passions of man's physical nature, though we should hardly have thought of contrasting it with the "incomplete life" of the monks and nuns with which Christianity had filled Syria and Egypt. We suspect the rigid suppression of sexual license is still, to a large extent, a greater "stumbling-block" in the way of Christian missionary work at home or abroad, than was ever "the Athanasian Creed." The "completeness" of Mahomedan polygamy is not likely to be imitated by civilized nations, though the experiment has been tried over again in a Republic whose sad fortune it is to clinch the teachings of experience by trying *all* things over again, and learning all things only by the mathematical process of *reductio ad absurdum*.

The line thus opened, Dr. Ireland carries through several subsequent chapters of very fascinating interest

on Joan of Arc: on the "Insanity of Power," as illustrated in the period of the Twelve Cæsars—that lazaret-house of moral subjects: Toghlaq, Sultan of India: several of the Russian and Spanish dynasties, all which bring out a fearful collection of the unsavory and terrible things of history, for those who like to "sup on horrors." But why the article from the *Quarterly* on St. Francis Xavier is brought in here, we hardly perceive, as its only object is to suggest natural explanations for the alleged miracle of the preservation of his body after death.

The remaining papers in this volume, which seem more closely related to our specialty, we shall have to reserve for further notice. The subjects are such as "Fixed Ideas," "Unconscious Cerebration," "Relation of Words to Thought," "The Dual Functions of the Brain," &c., which all will recognize as of profound interest and importance.

The Insane in the United States of America and Canada. By D. HACK TUKE, M. D., LL.D. London: H. K. Lewis, 1885, pp. 242.

This volume contains the results of a tour of observation made by the author in this country and Canada within a few years past. It is of course interesting, as is any work that fulfils the innocent aspiration of Burns—

"O wad some power the giftie gie us
To see ourselves as ithers see us."

The first chapter deals with "Early Lunacy Practice in America," and gives a valuable sketch of the theories and practice of Dr. Benjamin Rush, and the gradual displacement of his system of phlebotomy. We are quite disposed, however, to enlarge Dr. Tuke's hint, and question whether we have got much beyond Dr. Rush in settling the "solidarity" of the intellectual

and the moral faculties, so as to establish their relation to each other.

The second chapter gives a history of the Provision for the Insane in the United States, from 1752 to 1876. This chapter ends with a list of the principal hospitals of this country with the date of their erection.

The third chapter with which we are most concerned contains Dr. Tuke's notes and observations on the "Present Condition of the Insane in the United States" under the respective heads of—

- I. General Management and Treatment.
- II. Lunacy Legislation.
- III. Provision for the Chronic Insane and,
- IV. Relative merits of English and American Asylums.

It was chiefly the institutions in the northern and some western States that he visited. In a vast continent like this, so large a portion of it just beginning the career of civilization; it was not to be expected that he would see everything fully established and perfected, and to one seeking for defects and anomalies, it would be easy enough to find them. But he gladly testifies that in the States he visited, "with some exceptions, the condition of the asylums was satisfactory, many being admirably managed, and reflecting great credit upon all engaged in their administration."

Like any other English specialist he was disposed to pay special attention to the subject of restraint, as to which he finds the tendency to use it is growing less and less, fewer cases occurring to require it under improved general administration. "For surgical cases," it goes without saying; but he does not deny, in regard to the covered bed, for instance, that "there are patients who are constantly getting out of bed," and others who "persist in standing up" till exhausted, "for

whom it is an ingenious and sometimes effective device." Still he thinks it "an unpleasing object" and suggests (to a lively imagination) "an animal in a cage." It is just possible that to some persons it might suggest the precautions which most mothers have to take with their babies. Dr. Tuke thinks proper to mention that his travelling companion, "Dr. Baker, of the York Retreat, allowed himself to be shut up in one of these beds, but *preferred not remaining there*" (!) We congratulate him upon his escape, though we should be happy to have retained his company. To have fulfilled all the conditions Dr. Baker should have been a feeble dement, a paralytic, or a restless, feeble melancholic, with little or no sense of his surroundings.

But of course it is admitted that with the great standard improvements in hospitals, by the enlargement of the medical staff, and the increase in number, character and efficiency of attendants, the result of more professional instruction in their duties, there is a great diminution in the occasions for covered beds or any form of mechanical restraint. Dr. Tuke admits there has been some needless misunderstanding between English and American alienists on this subject. English institutions have proclaimed "non-restraint" as a principle, to the full extent of Conollyism; but American visitors find it in use there in "some necessary cases;" while in American institutions which decline to commit themselves to absolute non-restraint, English visitors discover far less than they had expected. The truth is, that on both sides, practically, restraint is applied in only what are regarded as *exceptional* cases: so that there is really no valid contention on the matter of *principle*.

In regard to classification and medical treatment, Dr. Tuke finds little difference between the best

English and American asylums. He believes the English make more use of open-air exercise and labor, though this is a matter of climate principally. We doubt if there is an establishment in England that can show a better percentage of what we might call able bodied labor and larger results accomplished by it, than the Willard Asylum for Chronic Insane.

Dr. Tuke speaks of the introduction of female physicians in some of our asylums with a view to advance the "therapeutics of uterine insanity," but is compelled to confess that "the results are but scanty, and fall far short of what had been anticipated from the particular attention thus paid to this department of practice, under, as I consider, very favorable auspices."

Most American visitors to England are inclined to think that insanity there is of a milder type or that maniacal excitement is not so violent or so long continued as with us. Yet Dr. Tuke says, that English attendants he conversed with in our asylums assured him that American patients were less difficult to manage.

Dr. Tuke finds little to criticise in the lunacy laws of New York, Pennsylvania and Massachusetts, but is justly severe upon that of Illinois which requires all cases for commitment to be brought before a jury. He gives abundant testimony from medical men and others that the effect is often disastrous in two ways: the effect it has upon many patients, giving them the permanent delusion that they are criminals sentenced by a court, or the victims of conspiracy: and again the effect of deterring many people from the step of committing an insane friend to an asylum at all. It is somewhat characteristic of American legislation, however, not to listen to *à priori* reasoning, but to insist upon trying all sorts of experiments.

As to provision for chronic insane, after giving a history of Willard and Kankakee and the county system of Wisconsin, he mentions attending a meeting of the New England Psychological Society, where he found the balance of opinion in favor of providing for the chronic insane by a system of annexes to the existing hospitals, instead of separate institutions.

As to the comparative merits of English and American asylums, we are gratified to find that Dr. Tuke brings out no points of comparison that are salient enough to require remark. With facile interchange of views and improvements constantly going on, it is natural that both should be aiming at the same results and reaching them substantially on the same lines. He is little in doubt about having so many "pay patients" associated with the public patients, in no doubt at all about the advantage of the "frequent practice of having *married* assistant medical officers," and rather thankful that England may have the benefit of some experiments we are trying here, without incurring the cost of such experience herself.

The remainder of this interesting volume consists in notes of his visit to a number of particular institutions.

The Field and Limitation of the Operative Surgery of the Human Brain. By JOHN B. ROBERTS, A. M., M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic, Surgeon to St. Mary's Hospital. Philadelphia: P. Blakiston, Son & Co., 1885.

This little volume is a welcome contribution to "fresh fields and pastures new" in practical psychiatry. Though occasion seldom arises for operative procedure for the relief of insanity, a sufficient number of cured traumatic cases, especially epilepsy, are on record to point to a wider sphere of usefulness for the trephine.

The accuracy with which the seat of a lesion may be determined by the principles of cerebral localization is well shown in a case of epilepsy in Dr. C. K. Mills' practice, and reported in this volume, in which recourse was had to the trephine. The three cases reported in this issue by Dr. W. B. Fletcher bear further testimony to the possibilities of cerebral surgery.

The author holds that the conversion of a closed fracture of the cranium into an open fracture by incision of the scalp is, with our improved methods of treating wounds, attended with very little increased risk to life; and that the removal of portions of the cranium by the trephine, or other cutting instruments, is, if properly done, attended with little more risk to life than amputation of a finger through the metacarpal bone.

Mention is made of McCormick's case of acute mania, occurring eight years after a depressed cranial fracture, which recovered after the depressed area of bone was removed. The author would justify the operation when, within a few months after a depressed fracture of the skull, progressive mental aberration occurs in a previously sane patient who presents no other assignable cause for the intellectual malady. He admits, however, that cases reported as cured of acute maniacal symptoms by the trephine are doubtful cures, inasmuch as they might have recovered without operation, and he would accept as more conclusive evidence of the value of operative therapeutics the recovery of a number of cases of chronic insanity after the use of the trephine.

He would not justify such procedure in cases where some degree of insanity antedated the injury, nor where the patient had had, previously to the injury, insane delusions, not traumatic, from which he had recovered before the traumatism. The trephine will be similarly

contraindicated when the character of the insanity is such that the pathological change is probably located in a region of the brain distant from the seat of injury, or where there is evidence of general cerebral disease. Dr. Roberts has spared himself no pains to cover the whole domain of cerebral surgery, so far as developed in our day, in his interesting essay. It is a field of work in which much may be done for suffering humanity, and the enthusiastic author has himself done much by bringing before the profession the possibilities of the trephine and pitting reason against prejudice in the use of what should no longer be, with our improved methods, an awe-inspiring surgical instrument.

NOTES AND COMMENTS.

ELMIRA REFORMATORY.—We have received the Annual Report of the Board of Managers of this institution for the year ending September 30, 1885, and transmitted to the Legislature January, 1886.

The remarkable experiments that have been put in operation here for the reformation of criminals, and the *cure* of the criminal tendency, with an encouraging degree of success, make these reports very interesting and valuable subjects of study.

The number of inmates during the year was 667: total since opening of the institution, 2,361. The date of opening is not given, neither are the Reports numbered. The whole number discharged has been 1,715. The number with indefinite sentences largely predominates over the "definites." Of the definites received (285) nearly two-thirds (185) were transferred here from State prison, 20 sentenced by U. S. Courts, and 80 by State courts. Of the definites discharged (276) 254 were by expiration of sentence and 15 re-transferred to State prison.

Of the 1,439 indefinites discharged, 11 were released without parole, 1,260 with parole, and 115 chiefly by expiration of maximum term with or without commutation. Two were killed, (one by an inmate,) 20 died from natural causes: two committed suicide, eight transferred to Criminal Insane Asylum, and 24 transferred to State prison. Of the 1,260 paroled it is interesting to note that 721 were absolutely released after six months for good conduct. The number failing to keep up correspondence was 115, re-arrested 62: returned voluntarily 20: sent to other prisons

32: released by being sent out of the state 106: died 9: discharged by expiration of maximum term 120: still out on parole 75. Of 82 returned and going through the same process, only 11 have been returned the second time, and only one the third time. This speaks exceedingly well for the management, for of all human tasks, a reformatory discipline and dealing with a hardened criminal class must be the most difficult. It would seem that the reformatory influences had permanent effect upon over 80 per cent of the number treated—84 per cent this last year.

Of the 2,076 indefinites, it is surprising to find over 50 per cent with "temperate" parents, and only 14.3 per cent of illiterate parentage, or "without any education:" while over 81 per cent had parents that were poor, or with "no accumulations." A little over 50 per cent had "positively bad" homes, 62.8 per cent living at home when convicted. Of 773 without homes 346 were "rovers and tramps." Over 85 per cent were in "good health" when convicted. It is startling to see that 1,333 are reported as absolutely without moral sense, either filial affection, sense of shame or personal deficiency. Certainly in this case the development of moral sense is what should be chiefly aimed at, for without this, intellectual knowledge or mere mental cramming can only make what the Duke of Wellington called "clever devils." We observe that over 94 per cent of their offenses were "against property." Crimes of violence largely follow intemperance. Over 60 per cent were admitted between 16 and 20 years of age. None are reported over 30.

The prisoners are classified according to character, habits, and progress in work and studies. Of the present 658 inmates 193 have reached the first grade after various periods of from 6 to 36 months. These

all take their meals together in a common dining-room, handsomely fitted up. It is this grade that furnishes most of the classes in all the common school studies, besides a large number of Lecture Departments supplied by a considerable corps of teachers and lecturers from the vicinity. There has also been recently formed a class in English literature, with researches into classical works that would be a great boon to many outside of prisons. There is of course much crudeness and unevenness of thinking to be found in the essays of prisoners on such things as Plato's Dialogues, Practical Morality and questions of casuistry: but though we may not quite rise to the enthusiasm of Chas. Dudley Warner over this picture, yet we have no doubt these somewhat ambitious exercises may tend to develop self-respect, and thus educate a moral sense which would do much to prevent a young man from sinking again to the level of criminal life. We are glad to see this course reinforced by the services and ministrations of two chaplains, one Protestant and the other Catholic.

There is a hospital attached, of which Dr. W. C. Wey, one of the Board of Managers, is the surgeon. Besides the 49 cases received into this, the Doctor has the whole institution under his observation and care, prescribing for the sick in cells, &c.

This Report contains a full account of the educational processes in the Reformatory, from a paper read by Mr. Collin, one of the instructors, at a meeting of the National Prison Association at Detroit, in 1884. There are also some very suggestive charts, showing the average lines of fluctuation in a graded prisoner's progress towards final parole.

The Board estimate the average maintenance expenses at \$100,000 yearly. Some contracts have expired; the

rest will be out by September, and as in deference to the workingmen the State has prohibited further contracts, the Board are naturally anxious to know what is to be substituted. The earnings last year were \$74,292.56, leaving a deficit of \$30,118.60. They ask the Legislature for \$75,000 for the balance of cost on the extension of the south wing, \$10,000 for furnishing it, \$5,000 for fitting up the Trade schools, and \$100,000 to draw upon for deficiencies in the maintenance account. The amount paid for salaries is \$21,482.35. Outside workingmen, who have prevented the employment of prisoners on the buildings, seem to forget that the whole object of the Institution is to take a class who were trying to live on the community without work, and fit them to get their own living by honest labor in society at large, even though it may come in competition with others.

This opens up only one more of the many difficult problems now confronting our modern civilization.

THE ALLEGED INCREASE OF INSANITY.—The last President's Annual Address before the Erie county Medical Society was delivered by the superintendent of the Buffalo Asylum for the Insane, Dr. J. B. Andrews, who took for his subject the question of the reputed *Increase of Insanity* in this country. This popular impression is derived from the facts of the rapid multiplication and speedy filling up of new institutions; the formidable statistics of the decennial census; and the growing frequency of newspaper accounts of crimes and casualties arising from insanity.

While Dr. Andrews would not deny some increase of insanity, perhaps slightly beyond the proportion to be expected from the actual increase of population, he yet shows that in large degree it is only an apparent

increase to be accounted for by a variety of circumstances, some of them abnormal to a settled and homogeneous condition of society.

First he observes that the progress of science and humanitarian care has widely extended the boundaries of this malady, and made them to include a vast number of those who in former times were ignored or left to the care of their friends, so long as they were sequestered or isolated from public notice. When the only chief object of legislation was to protect the community from danger by sudden violence or crime, it would be almost exclusively the actively maniacal or the helplessly demented that would be formally committed to insane asylums. But almost every form of neurotic disorder that effects the mental powers in any way is deemed a proper matter for treatment in the public or private hospitals. The limits of responsibility under disease have also been greatly narrowed of late years, by the progress of medical jurisprudence, so as to transfer to this department considerable numbers of those who were never before classed with the insane. Although it might be a question whether it would be better in the long run to avoid fixing the stamp (or stigma) of insanity upon as many cases of cerebral difficulties as could possibly be got along with under some other name, Dr. Andrews certainly very forcibly illustrates the apparent increase of insanity through this cause, by comparing it with the enlargement of a city or town by taking in its environs or suburbs, and not by actual increase of its population.

Another factor the doctor estimates in the greater *longevity* of the insane, with all the improved methods of treatment, the better accommodations and more healthful arrangements of their residence, the more scientific ordering of diet, exercise, occupation and amusements,

with many other details that contribute to rest and contentment. This has perhaps even surpassed the increase in the average length of life in the community at large.

The facts above given must also account for the multiplication of institutions. This increase also makes such institutions accessible to much larger territory, so that a greater proportion of the people avail themselves of the treatment. To the same effect also is the advance of medical education, and the increased attention given to this department by the medical colleges themselves.

The increase in the census would also from the same causes be largely only an apparent increase, because not only has science become more stringent in cognizing all true cases of insanity, but the apparatus of the census department itself has been made more complete and searching. The census of 1880 was far more thorough and accurate than the one of 1870. No doubt too from longevity and good care, a growing contingent of chronic insanity is left over from each census enumeration.

To get at any real ratio of the insane to the normal population, the natives and the foreign immigrants should be estimated separately. To those leaving their own land coming to a new climate, subject often to great hardships and privations before success in establishing a new home, the ordinary causes of insanity would be greatly aggravated, and produce exceptional increase in the statistics. We have good reason to expect that in the future the figures from this source will diminish, and that, as Dr. Andrews hopes, the increase "will be in an arithmetical rather than geometrical ratio."

ASYLUMS FOR INSANE CRIMINALS.—It is almost the exception to take up an American asylum report now-a-days without finding in it a recommendation for the establishment of a special institution for insane criminals. We have always held that such separation is eminently desirable, and our reasons for this opinion have been fully set forth, as occasion required, in this JOURNAL. We had imagined that our position was established upon an unassailable basis, but now find our views opposed in a quarter where opposition was least expected.

There has recently appeared in Germany a volume on the "Relations between Insanity and Crime,"* which has set our German brethren agog by the radical position which it assumes. One of the joint authors is Dr. W. Sander, whose large experience as an asylum physician entitles him to a respectful hearing. This well-known alienist has constituted himself the champion of insane criminality—a German reviewer† says "*advocatus diaboli!*"—and reaches the surprising conclusion that no real necessity for the asylum for insane criminals exists. It may be profitable to quote a portion of Dr. Sander's argument:

Granted that insane criminals introduce many disturbing elements, yet these latter are not to be estimated so highly, in degree or kind, as to require for them appurtenances different from those which are accorded other insane patients. The development of a more liberal system in asylums for the insane will not be hindered by their presence, when by this term is not understood a stereotyped, uniform treatment of all, or when by the removal of the more unmanageable patients it resolves itself into a sham. If in the case of small asylums one or two wards of

*Die Beziehungen zwischen Geistesstörung und Verbrechen. Nach Beobachtungen in der Irrenanstalt Dalldorf von Dr. W. Sander und Dr. A. Richter. Berlin, 1886. 404 S.

† Dr. Pelman, *Allgem. Zeitsch. der Psych.* Bd. 42 H. 4.

that department which is already destined for dangerous and disturbed patients, be made of greater mechanical strength, if in the case of large asylums an annex of similarly stronger construction be added, it will not be necessary to change the character of the institution in the slightest degree, neither will the other patients find themselves in the slightest degree worse off, nor will the physicians and the rest of the asylum *personnel* be handicapped in the execution of a liberal and humane policy. Then let—and this is much more important—there be a corresponding increase of intelligent supervision, good discipline and careful vigilance; above all, let the physician himself bestow greater attention on the division, reinforce control and oversight, and vouchsafe to these patients an appropriate, humane and withal earnest treatment, so might it well be possible to keep insane criminals in the asylum without serious harm or without endangering public safety.

As ancillary to this pretty plan, Dr. Sander proposes that an alienist be attached to the prisons, at all events to the larger ones, that attention be directed more than heretofore to the mental condition of the culprit (especially in the case of the young,) and less to the matter of simulation. “Not special asylums but special physicians. When the prison physician fulfils all the requirements of psychiatric knowledge, one may confidently leave to him the treatment of insane criminals, and on the other hand assume, without undue anxiety, the care of those who are sent to us.”

By way of commentary on the foregoing opinion, we may adopt for our own the language of the German reviewer already referred to, and say: “I am only afraid that notwithstanding these seductive views, very many of my colleagues will share my wish that the prison physicians might cure them one and all, or keep them to themselves, but only send us as few of them as possible.”

ENGLISH STATISTICS OF SUICIDE.—It appears from a paper lately read before the Statistical Society of London, by Dr. Ogle, and reviewed in the *Lancet*, that during the twenty-six years 1858–83, as many as 42,630 persons died in England and Wales by their own hands. In this large number are not included those returned as “found dead.” Two children under ten appear on the list. The greatest number of suicides occur between the ages of twenty-five and thirty-five, while after sixty-five the rate falls.

As regards sex the rate per 1,000,000 is 104 for men and 41 for women. Looking to occupation, it appears that in the case of soldiers, the proportion of suicides is exceedingly high, being 1,149 per 1,000,00 living, while the proportion for “all males” is only 222 per 1,000,000. Physicians stand pretty high on the list as regards frequency, taking nearly equal rank with innkeepers, publicans, spirit, wine and beer dealers. Miners stand at the bottom of the list, and clergymen very near them.

The greatest number of suicides occur in June, and fewest in December. Dr. Ogle thinks that the explanation may be simply that as the days grow longer the movement of life, be it for business or for pleasure, becomes more and more active, and that the changes in the amount of suicide correspond to the consequent changes in the amount of mental excitement.

Of all methods of self-destruction hanging is the most, and the railway train the least, popular. As a general rule a man resorts to some means within his reach or suggested by his occupation. Dr. Ogle remarks on the subject of method:

If the year be divided into two periods of six months each, the one from October to March, the other from April to September,

inclusively, out of 1,000 suicides committed in each period there are in London, on an average of twenty years, 205 suicides by drowning in the warmer period, and only 177 in the colder period. This is only another example of the fact which came out more strongly when the choice of poisons was under review—namely, that even when about to commit suicide persons are not indifferent to considerations of comfort or discomfort. The idea of death in cold water appears repulsive in winter seasons, and that method of self-destruction is avoided.

SCOTCH METHODS IN MASSACHUSETTS.—Under the provisions of a statute passed in the year 1885, the State Board of Health, Lunacy and Charity has undertaken to place in families throughout the Commonwealth, a small number of those insane persons previously committed to the State hospitals. The number so placed since August 10, 1885, has been 39, 13 men and 26 women, of whom 34—11 men and 23 women, now remain in their boarding places. Three persons, a man and a woman, have been returned to the hospital from which they were taken, as unsuitable cases; two have practically recovered, and two more will soon be discharged as able to care for themselves. All those who remain in their boarding places have conducted themselves well, and so far as can be judged, have improved in their condition. It has been found that many families living in comfort are willing to receive such boarders, provided suitable patients are selected; and there are at present applications pending for at least twenty more patients, who will be sent to these boarding places, as soon as patients well adapted for this mode of life are found in the State hospitals.

The Scotch system of boarding out pauper lunatics may be said to date from 1860, when, in the Second Annual Report of the Board of Commissioners, the

following opinion was expressed: "That all cases of insanity should be placed in asylums is a proposition which we can not entertain; the welfare of the patients would not thereby be promoted, while the expense of the country would undoubtedly be greatly increased." This was the foreshadowing of the cottage system which was subsequently inaugurated, and the Act of 1862 made it lawful for the Board to grant special licenses, free of charge, to occupiers of houses, for the reception therein of lunatics not exceeding four in number, subject to such rules and regulations as the Board might impose.

We find from the Twenty-Seventh Report of the Scottish Board that up to January 1, 1885, there had been granted 413 such licenses, and that at one time or another these specially licensed houses have given accommodation to 1,358 patients.

In 1866 certain requirements which the Board had found desirable as to the supervision and medical visitation of these boarded-out patients, were embodied in an Act. The Inspector of the Poor has to make two visits yearly, and the parochial Medical Officer one quarterly, each being required to record his opinion as to the state of the patient, the house, clothing, bedding, cleanliness, &c.

The growth of this system in Scotland during the past decade, from 1,472 patients in private dwellings in 1875 to 1,989 in 1885 is attributed by Deputy-Commissioner Fraser to various causes, among which may be mentioned the overcrowding of asylums which has forced attention to the suitability of boarding-out for a certain class who did not really require institutional care and treatment.

Whether or not the system is adapted to this country remains for experience to determine, and the

experiment of Massachusetts will be watched by practical alienists with considerable interest.

POLITICS IN ASYLUM MANAGEMENT.—No more hideous illustration of the baneful influence of politics in asylum management has occurred of recent years than is afforded by the action of the Philadelphia Board of Guardians in declaring a new deal in the insane department of the almshouse. We use the word "deal" advisedly, for there is, on the one hand, nothing in the dismissal of that veteran alienist, Dr. D. D. Richardson, to show that his ejectors were actuated by considerations of public weal, and everything, on the other hand, to indicate that he forfeits his position solely by reason of the machinations of a time-serving cabal. We refrain from entering into the distasteful details of the crusade. It is the old story of spoils to the victors. In place of a physician against whom there is no charge, and in favor of whose retention might be urged competency, strict and unqualified devotion to duty, together with more than a quarter of a century's professional connection with the insane, has been substituted a successor with no special knowledge or experience, whose claims to the superintendency are political rather than professional, and who enters upon the duties of his responsible position as the triumphant candidate of an anti-reform faction. *Le roi est mort! Vive le roi!*

A NEW LUNACY APPOINTMENT.—By virtue of a recent resolution of the Board of Public Charities and Correction of New York City, Dr. A. E. Macdonald has been appointed their General Superintendent of the Insane. He will have general supervision of the insane coming under the care of the department, the

institutions subject to his jurisdiction being as follows, to wit: The Reception Pavilion for the Insane at Bellevue Hospital; the New York City Lunatic Asylum on Blackwell's Island; the New York City Asylum for the Insane on Ward's Island, and the branches thereof upon Ward's, Randall's, and Hart's Islands, and the farm on Long Island. It shall be the General Superintendent's duty to forthwith establish, so far as may be practicable, schools for the instruction of the attendants upon the insane employed in the various institutions, and prepare and submit to the Board for approval, rules for their government. Transfers of patients from any one to another of the institutions named, and the return of patients from the several branches to the main asylums, or from the latter to the Reception Pavilion, shall be made only with the General Superintendent's knowledge and approval. In short, Dr. A. E. Macdonald shall perform such duties as are implied in the title of the new office, and we make no doubt that he will prove an efficient officer in his extended sphere of usefulness.

ANOTHER ASYLUM FIRE.—Dr. L. S. Hinckley, Superintendent of the Essex County Asylum for the Insane at Newark, N. J., furnishes an interesting account of the fire which destroyed the third story of the left wing of the asylum on the afternoon of January 2d. The fire probably originated at the lower end of a vertical chute which carried ventilation and the sewage and water pipes to the bath-rooms and water-closets of the three floors of the wing. This chute, terminated in a louvre at the roof, where a steam coil was hung to facilitate ventilation, and the fire thus urged by the strong draught, was rapidly communicated to the roof and upper floor. There were one hundred and ten

patients in the wing, twenty-eight of whom were women—cases of a mild class—chronic mania, dementia, and a few epileptics. They promptly formed in line at the order, and were quickly and safely removed to the grounds—the wing being entirely empty in ten minutes.

Although unable to present a reasonable theory of the cause of the fire, Dr. Hinckley disclaims the idea of spontaneous combustion, there having been no inflammable materials stored in the chute. In conclusion he writes :

There was a remarkable display of coolness on the part of both patients and attendants; orders were obeyed promptly and quietly, and at no time was there any excitement bordering on a panic. In fact, the so-called panic that is said to exist during a fire in an asylum, I believe to be only in reportorial imagination. This is the second fire that I have passed through, and I have failed to observe anything of the kind. In the first instance, which occurred in the Lodge at the Lunatic Asylum, Blackwell's Island, in 1879 or 1880, ninety-three female patients of the most violent class were awakened from sleep and removed with but little difficulty.

The presence of warm weather and the outbreak of fire in the daytime were two fortunate factors in the recent fire. Had it occurred at night, I fear it would have been terrible in the result.

—Dr. C. E. Faulkner, Secretary of the Board of Trustees of Kansas State Charitable Institutions, complains that there is no official in Kansas charged by law with the duty and authority incident to returning to responsible States the lunatics and paupers imposed upon them by the drift of immigration, or the design of unscrupulous officials. No money has ever been provided for the enforcement of existing settlement laws against foreign dependents by State authority. Asylums in Kansas contain several examples of mistaken charity, which, had they passed the scrutiny

of a careful official charged with authority to act, would have found their way back to a responsible lodgment in other States, and the commitment papers issued by bewildered probate judges have been set aside. Remedial legislation would seem to be urgently needed to place Kansas on an equal footing with other States in this respect.

—The physicians of the Willard Asylum are to be congratulated on their enterprise in having established a Staff Medical Association. Meetings are held twice a month. The following are the titles of the essays on the season's programme. Dr. Allison: The Moral and Industrial Management of the Insane. Dr. Bristol: The Gross Anatomy and the Convolutions of the Brain. Dr. Nellis: Therapeutics of Insanity. Dr. Wise: Neurotic Complications of Insanity. Dr. Blaine: Cerebral Apoplexy. Dr. Sylvester: Hysteria. Dr. Wilkins: The Localization of Function in the Cerebral Cortex. Dr. Hopkins: Masked Phthisis.

—We are glad to learn that the honor of knight-hood has been conferred by the Queen on Dr. J. Crichton Browne. This is no doubt a recognition on the part of the Government of his recent valuable services in connection with the question of physical education in schools and overpressure, not to mention innumerable other claims to Royal favor.

ASYLUM APPOINTMENTS.—At the Topeka Insane Asylum, Kansas, Dr. B. D. Eastman has been appointed Superintendent, and Dr. L. F. Wentworth, Assistant Superintendent, *vice* Drs. A. P. Tenney and W. S. Lindsay, resigned.

At the Osawatomie Insane Asylum, Kansas, Dr. E. P. Stinson has been elected Assistant Superintendent, *vice* Dr. G. P. True, resigned.

At the State Asylum for Insane Criminals, Auburn, N. Y., Dr. Fred Sefton has been appointed Assistant Physician, *vice* Dr. Wells, retired to enter upon private practice.

BRITISH NEWS.—*Lunacy Legislation*.—Now that Parliament has again assembled, those interested in the subject will be on the *qui vive* for news regarding the lost lunacy bill of last session. At present Dame Rumor is silent regarding such a little matter; for her hands are full of graver problems, the change of Government and the Irish question being the all absorbing topics of the hour. When the political atmosphere has somewhat cleared up the old cry of lunacy legislation is sure to rise to the surface and a more drastic measure than the Lord Chancellor of last year had any heart for, is not an improbable prophecy. The danger of taking up the question of reform in the present lunacy laws lies in the fact that they are on many sides so defenceless, that they are in danger of falling to pieces if tampered with at all. Nothing is more absurd and perplexing than the diversity which obtains in the three countries of the United Kingdom, and a measure which shall assimilate their lunacy laws and practice will be demanded sooner or later.

Medico-Psychological Association. — The northern branch of this association which held its last meeting in Edinburgh resolved next time to meet in Carlisle, thus crossing the border we believe for the first time. The Scotch meetings have not been very successful of late in point of numbers or scientific interest. The change to

the south will plough up new ground for a time and allow the exhausted Scottish soil to recover itself. The London meetings are much more successful, the papers and discussions are more numerous and interesting, the attendance is larger and a visit to the great Babylon is always a temptation in itself.

—(*Communicated.*)

OBITUARY.

DR. T. R. H. SMITH.

We referred in our last issue to the death of Dr. T. R. H. Smith, late Superintendent of the Missouri State Lunatic Asylum, No. 1, at Fulton. The following tribute to his deceased friend is from the annual report of Dr. George C. Catlett, Superintendent of the Missouri State Lunatic Asylum, No. 2:

In conclusion I embrace the sad privilege of officially announcing the death of Dr. T. R. H. Smith, the physician and superintendent of State Lunatic Asylum No. 1, which event occurred on the 21st of last December, and in the sixty-sixth year of his age. Dr. Smith died from nervous prostration, after an illness of thirty days, caused by taking cold. Naturally of delicate constitution, he had for many years been in feeble health, and it therefore required only the disturbing influences of the climatic changes of the fall and winter seasons to derange his general health, which finally terminated in fatal prostration. Dr. Smith was a native of Kentucky. After obtaining his literary and medical education in the colleges of that State he removed to Missouri and commenced the practice of medicine. In 1855 he was elected to the office he held at the close of his life. Dr. Smith continued in the service of the State as physician and superintendent of the State asylum uninterruptedly, except for a short period after the close of the war between the States, for thirty years. He was the oldest superintendent, with one or two exceptions, in the United States. The early history of insane asylums in the United States shows that they were subjected to many more embarrassments and were surrounded by many more complicated difficulties than the institutions of the present day have to contend with in their administration, many and difficult as they now are. Then greater ignorance and superstition prevailed as to insanity and its treatment, and with the limited provisions which legislatures could be induced to make, and the doubting and censorious attitude the public often manifested towards asylums and their management, superintendents required stronger elements of character, unwavering determination of purpose, together with the strongest convictions

of duty harmonizing with a boundless sympathy for the afflicted, to enable them to succeed and persevere in the discharge of their duties. Dr. Smith was pre-eminently blessed with these high and superior moral and mental endowments. His high moral character, exemplary Christian life, his tender, gentle sympathy for the afflicted, his intellectual acquirements, his professed love for the study of medicine, chiefly for the benefits it confers on suffering humanity, clothed him with a wide and extended influence and gave him great power to control the friendly and to harmonize the adverse elements in the interest of the institution. These characteristics added force and efficiency to his superior administrative ability, which enable him to keep the institution steadily advancing in the march of progress. For more than thirty years he devoted his intellectual and physical capabilities to this cause of suffering humanity. He was not influenced by the love of honors, nor power, nor wealth, but by a dominating sense of duty, the fulfilment of his mission in life. His life work was to give hope to the despairing, and the hopeless, and to lead the wandering intellects out of the oblivion and darkness or disorder into the light of soundness and reason. I doubt not but the clouds that surrounded the mortality of this good man and good physician were dissolved by the supreme love of his Maker, and that he will continue to live in an eternity of His supreme light and love. 2



